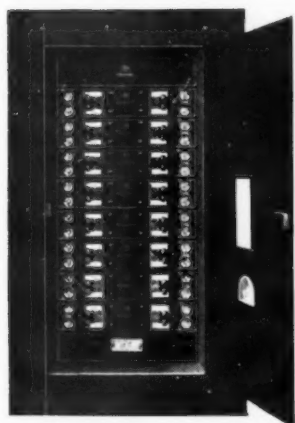


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With Which Is Incorporated
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Every single panelboard is standardized to be an able representative of the entire FA output.



Frank Adam

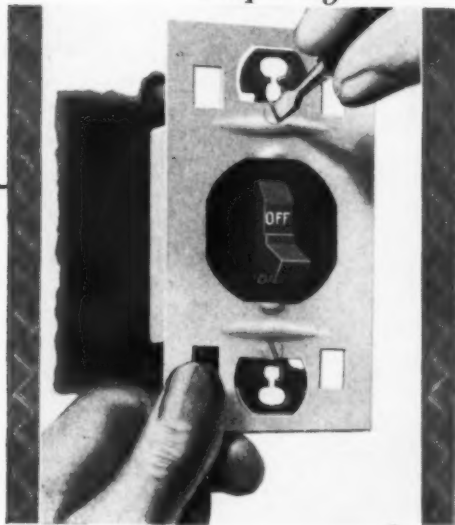
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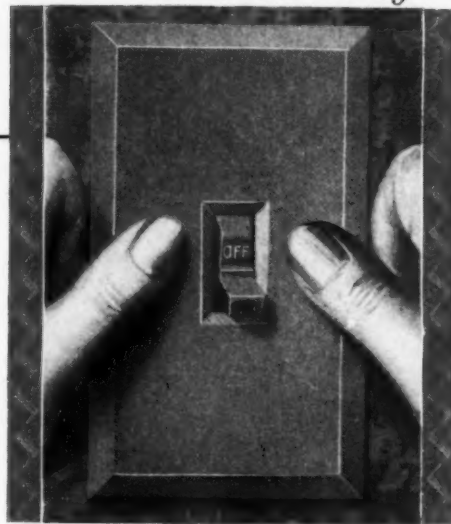
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Send for and work from the FA Catalog. Have the FA district office men co-operate with you.

1 Screw-on a metal
Under-plate for strength
~simplicity



2 Snap-on a Bakelite
Cover-plate for perfect
insulation~beauty



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*Practically two plates in one
Stronger ~ perfectly insulated ~ time-saving*

(1) *A Metal Under-plate*—cadmium-plated, rust-proof—screwed to switch or receptacle when wiring is done.

Provides a stiff, unyielding support for the Bakelite Cover Plate. Protects the switch or receptacle—and *automatically* brings them flush with the plaster line. No time-wasting aligning or "building-up" necessary!

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E.C.4-29

Electrical Contracting

With Which Is Incorporated The Electrician

S. B. WILLIAMS
Editor

Vol. 28

APRIL, 1929

No. 6

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RESALE PRICE NEWS

An upward tendency can be noticed in the resale price service changes this month. Most of the changes were due to rising metal prices, although some were indicative of shifting factory production and consequent overhead.

There were well over 600 price changes and some additions in this month's price service, the most notable being the addition of the Murray Switch line.

Standard and bracket switch boxes show lower prices; other types are higher.

All rubber cord is reflecting higher copper prices. The same is true of rubber covered wire and cable, which advanced again this month.

Black conduit is down in the 2, 2½ and 4 in. sizes.

Lower prices are given for standard elbows and couplings while those for Erickson couplings are higher.

A considerable advance is noticed in flexible metallic conduit, while for 250-volt porcelain base cartridge cutouts, a sharp reduction is shown.

Rises in price were noted in clusters, a few sizes of connectors and T-V switches.

Soldering supplies—paste, salts and stick—are also higher in price.

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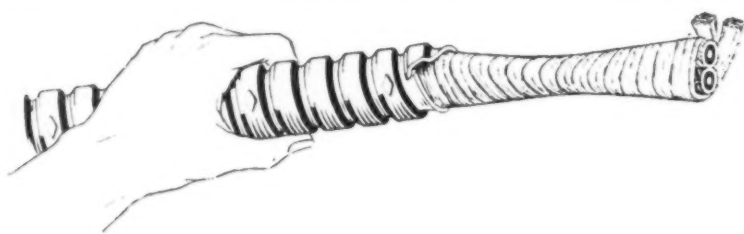
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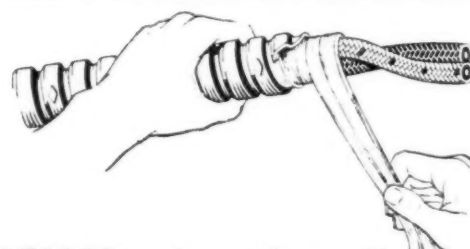
Armored Bushed Cable
"Double Armored" Cable

The New NATIONAL "FLEXSTEEL" Cable

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ARMORED-



KRAFT ARMOR is additional compact protection between conductors and steel.



KRAFT ARMOR strips with a pull—no possible injury to conductors—reduces labor.

6 WIRING SYSTEMS and FITTINGS FOR *Every* CONCEIVABLE REQUIREMENT

- ① 
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- ③ 
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"Anti-Short" Bushing between sharp steel and conductors prevents grounds. Makes perfect job.

Kraft Armor strips from under steel to allow room for "Anti-Short".

The perfect low priced wiring system—A.B.C.

National Electric

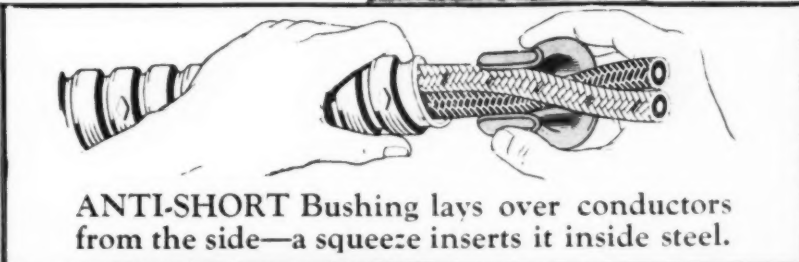
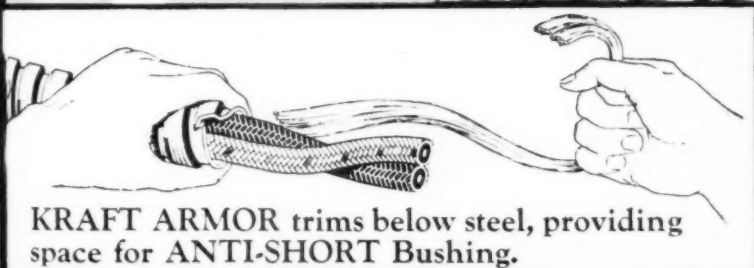
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BONDHOOK Armor of steel—giving maximum grounding continuity.

KRAFT ARMOR between conductors and steel.

ANTI-SHORT Bushing between conductors and steel prevents shorts.

2163 A.B.C. Connector shows the red anti-short



Insulating ANTI-SHORT Bushing slips between sharp edges of steel, and conductors; increases insulation at most critical point.



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Many more places for RomeX under 1928 Code Rules

You can now use RomeX in more places than ever before. Both in old houses and new ones; in cellars, home laundries and two-car garages; in apartment houses with wood-frame partitions; and small stores and offices in residential localities...This means greater profit on more jobs for you—and lower cost for your customers. For RomeX is easier to handle, quicker to install, needs fewer fittings—all of which cut labor costs.

Have you used RomeX? If not, let us send you complete facts. Just ask for the latest RomeX booklet.

ROME WIRE COMPANY, Rome, New York
Division of General Cable Corporation

2901-R

ROME WIRE

Reader Confidence

THE real test of the place a magazine holds in the industry it is trying to serve is, after all, not the circulation, not the letters of commendation; but the way its readers turn to it for help. If the readers turn instinctively to a magazine for information and help, then that magazine enjoys the confidence of its field. It is recognized as **the** authority—it holds first place in that field.

Publishers welcome letters from readers requesting help, even though it places an added burden upon the staff, for it gives them a better opportunity to know more of the problems of the field and, in that way, helps them to keep the magazine abreast of the requirements of its readers and present a timely, newsy paper.

GENERALLY, the requests for help can be answered by the editors at once, but in not a few cases, considerable research is required. The requests for information and help, from readers of ELECTRICAL CONTRACTING are as varied as the activities of the field. They range from legislation to installation practice, from engineering to management. While many are general, others are of the most intimate nature. They come from all parts of the country

and from all classes of contractors, large as well as small.

READER confidence is not won over night—it is a reward which comes only after years of honest, constructive effort to build it. Because ELECTRICAL CONTRACTING, unlike many other papers, has known but one allegiance—has championed but one cause—the advancement of electrical contracting—it has won from its readers the well-earned reputation of being “the contractors’ paper.” For twenty-eight years ELECTRICAL CONTRACTING has given its undivided attention to the progress and welfare of the electrical contractor. Is it surprising then that ELECTRICAL CONTRACTING enjoys the confidence of its readers?

The publishers of ELECTRICAL CONTRACTING, in accepting this reader confidence, are not unmindful of the responsibility it entails. So when readers come to them for help in much the same manner that one approaches a family physician—hopeful, confident—they can give no thought to the time or extra work involved, but rather do they consider it a privilege to receive from their readers the expression of confidence which their requests for help convey.

It's NEW and BETTER

DURAFLEX
REG. U.S. PAT. OFF.
DOUBLE ARMORED
A.B.C.
Armored Bushed Cable



Approved by
Underwriters' Laboratories, Inc.

Where it's New and Why it's Better!



This is the A. B. C.
ANTI-SHORT Bushing
An ample supply is fur-
nished with every coil of
Duraflex A. B. C.

A Better Cable — that is the keynote of Duraflex A. B. C. It means more profits to you, for this KRAFT ARMORED cable is quicker and easier to install and it is double-guarded against shorts.

No more troublesome stripping of over-braids. Just unwind the KRAFT ARMOR and snap it off. It breaks inside the steel sheath, far enough back so the ANTI-SHORT Bushing can be slipped between the conductors and the steel armor.

That is all — The end is ready for the outlet box. Quick, isn't it? And remember . . . the ANTI-SHORT provides additional tough insulation right where it is most needed.

For speed and safety on wiring jobs, specify Duraflex A. B. C. It's a Durabilt Product.

TUBULAR WOVEN FABRIC COMPANY
 PAWTUCKET, R. I.

It's a DURABILT Product

Vol. 28
No. 6

Electrical Contracting

With Which Is Incorporated The Electragist

April
1929

John W. Rice

says: "SELL YOURSELF TO YOURSELF"

HOW many jobs would you land if you said to the customer, "This is an awful piece of cheese I'm selling you. The materials ain't up to code, in the first place, and the workmanship is something to make an umbrella-mender blush, but the price is just enough for me to starve to death on, so you ought to be satisfied."

How many jobs, I ask, would you land with a spiel like that?

Now, I don't mean to say that the average electrical contractor talks like that when he tries to sell himself, but nevertheless, that's about the impression he gives the customer.

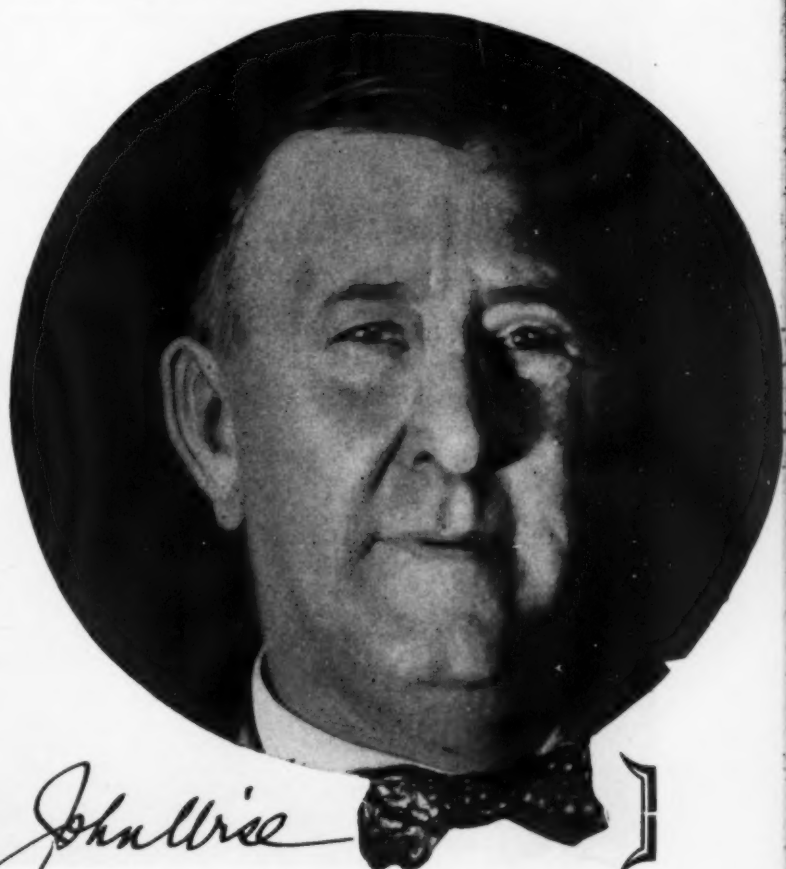
I've made it a point to know a good many of my fellow electrical contractors, and one thing I've noticed is that a whole lot of fine, capable men in this business you and I are in LACK CONFIDENCE IN THEMSELVES. They don't know how good they are. And so, when they talk to a customer they stall and say "Yes-yes," and "I'll do it your way," and "I guess you're right," instead of saying "This is the way this job ought to be done. Leave it to me. I KNOW." That's really the way most customers WANT you to talk.

Now, you know that when a salesman comes in to sell you anything from a carton of fuse plugs to a conduit bender, he isn't a bit backward in letting you know that his stuff is GOOD. He may be mouthy or he may be soft-spoken, but you know that he believes the material to be very much O.K.

And the reason is that before he ever started out to sell you he went off in a corner and SOLD HIMSELF. He looked at his goods with a micro-

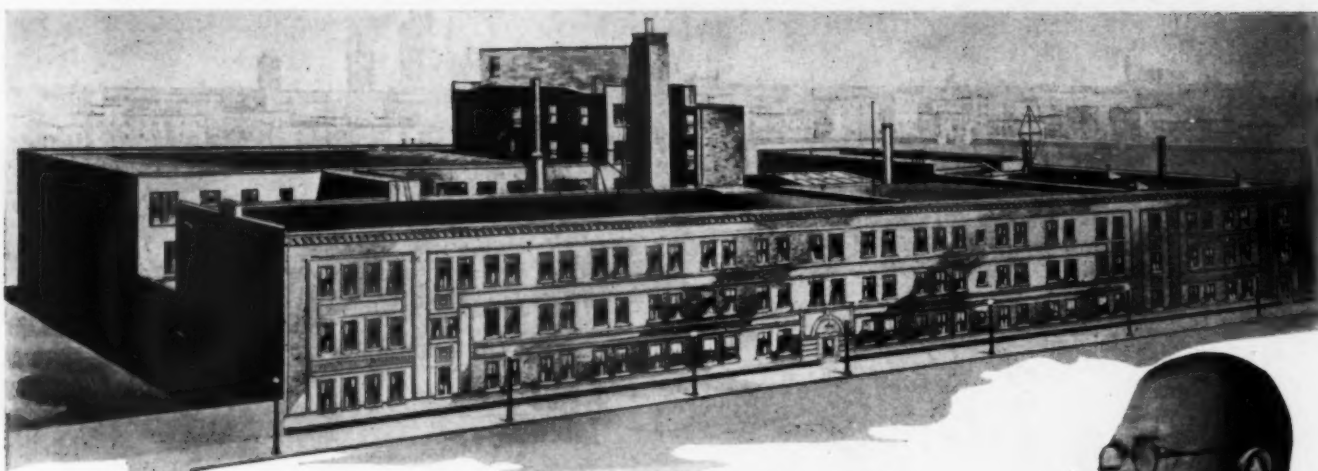
scope, found all their good points, convinced himself of their merits—and when he got to you he was just bubbling over with that old confidence which made you say to yourself, "This lad certainly BELIEVES in the stuff he's selling."

That's exactly what you want your customers to think about you. You want them to think, "This man BELIEVES in himself." And nine times in ten they'll believe in you if you make them think that you believe in yourself.



[Sell Yourself to Yourself and You Won't
Have Much Trouble Selling Yourself to
Your Customers.]

John W. Rice



Three laboratories, one in Chicago (above), others in New York and San Francisco, are equipped to test devices under conditions similar to actual use.

Back of the LABEL



Paul D. Huston, one of the service engineers. These men travel about the country constantly, meeting the inspectors and the trade, learning the field requirements and needs in order to make the Laboratories' service of maximum value to the electrical industry and the public.

"Approved", to the electrical industry, means: labelled by Underwriters' Laboratories -- an institution now 36 years old. Back of the label is:

- 1. A fair and reasonable standard which all products of the same class must meet in a laboratory test conducted by experienced men in order to secure the label in the first place.*
- 2. A corps of trained inspectors, nationally distributed, keeping labelled products up to standard by continuous, systematic and thorough factory inspections.*
- 3. Field engineers in continual contact with electrical inspection departments and industries for the purpose of keeping the standards, at all times, in tune with field requirements.*



Ninety percent of the value of the label is in the factory check-up made by the Laboratories' inspectors. Every manufacturer of a labeled electrical device is visited by an inspector at least twice a month. The inspector examines, measures and tests the current production and often selects samples which are sent to New York or Chicago for further review. At the left two inspectors are shown weighing armored cable to check up on armor thickness. At the right an inspector is subjecting coils of rubber-covered wire, immersed in a tank of water, to a voltage test to discover flaws in the insulation.



Testing rubber insulation for stretch and strength. On the desk are samples to be tested which have been sent to the laboratory by factory inspectors.



IN making test standards, and the tests, particular attention is paid to the abuse to which a product might be subjected as well as its use, and there are, therefore, five searching questions that must be answered:

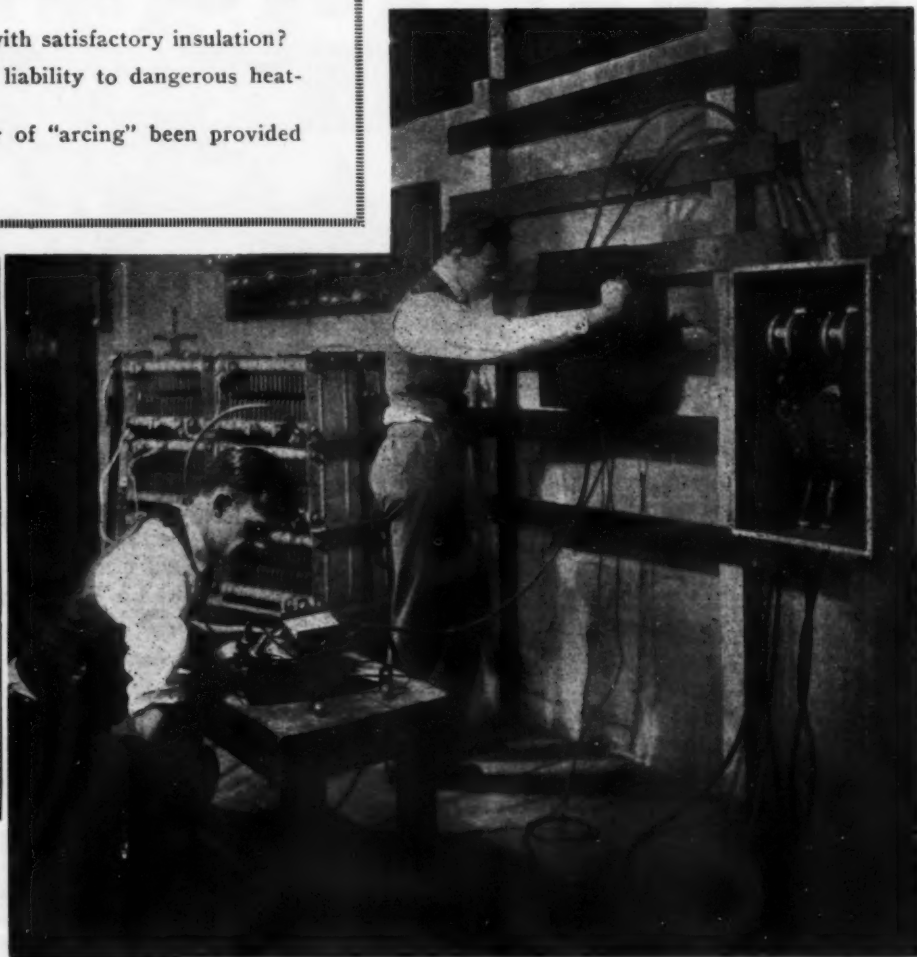
1. Is it suitable for the use intended and can it be properly installed?
2. Are its mechanical strength and durability adequate?
3. Is it provided with satisfactory insulation?
4. Is it free from liability to dangerous heating?
5. Has the danger of "arcing" been provided against?

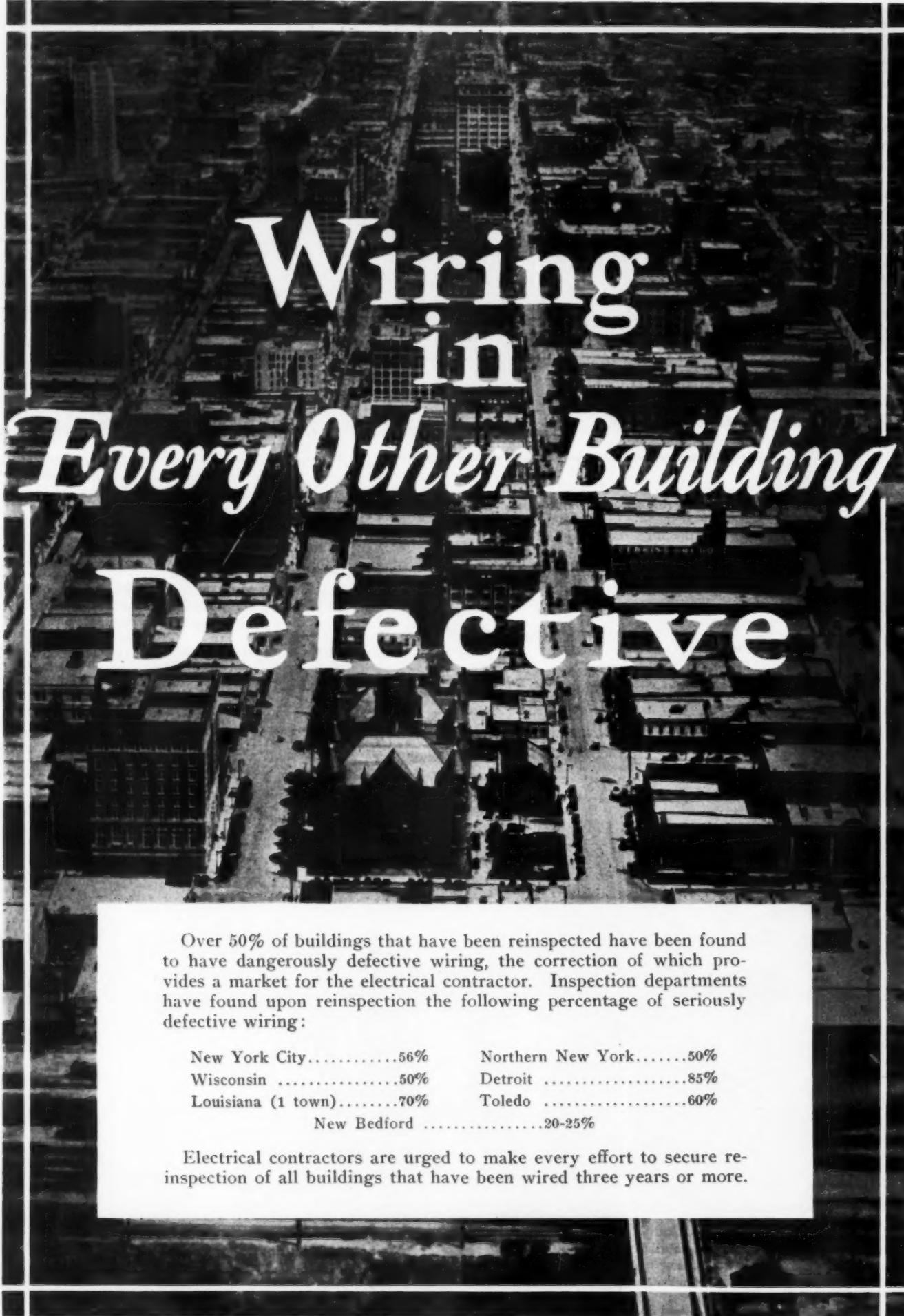
Sixteen years of usage are represented in this test of sockets and switches, which must survive being snapped on and off twenty times a minute for six thousand operations.

Enclosed switch being tested under conditions approximating, as close as possible, those to be found in actual service.



Will a wireman be liable to pull an armored cable apart while installing it? The picture shows a strength test applied to determine this.





Wiring in *Every Other Building* Defective

Over 50% of buildings that have been reinspected have been found to have dangerously defective wiring, the correction of which provides a market for the electrical contractor. Inspection departments have found upon reinspection the following percentage of seriously defective wiring:

New York City.....	56%	Northern New York.....	50%
Wisconsin	50%	Detroit	85%
Louisiana (1 town).....	70%	Toledo	60%
New Bedford	20-25%		

Electrical contractors are urged to make every effort to secure reinspection of all buildings that have been wired three years or more.



UNIT LABOR COSTS

for Installing

WIREMOLD

By W. J. SHORE

THE three tables on the next two pages giving unit labor costs on the installation of wiremold are the first labor figures, fairly complete in detail, that have been available for surface raceways.

The labor required for the different operations will vary, depending on the type of surface on which the materials are installed and on the ceiling height. The average ceiling height varies between 9 ft. and 12 ft. 6 in. Higher ceilings will increase the figures in the tables as noted.

There are three common types of surface: Plaster on lath, and wood; sheet metal; and brick, concrete, tile and stone.

The first class, plaster on lath, and wood, involves the least possible labor. To spot the proper hole and put in a wood screw is the simplest operation. With sheet metal ceilings or walls it is necessary to locate beams for support or else use toggle bolts, both of which operations require an additional amount of

time. Brick, concrete, tile and stone require the maximum amount of labor because of the necessity for drilling holes and inserting some type of expansion shields.

The labor of fishing conductors and of the finishing work of course is identical regardless of the surface. Fishing time depends mainly on the size wire employed, the length of run between outlets averaging between 10 and 15 ft.

Four-wire raceway, for example, requires 3 hrs. per 100 ft. on a wood ceiling and 5 hrs. per 100 ft. on a concrete ceiling, for one man. If there is one long straight run, this will include the time necessary to line it up, to install a plumb line, spot the various holes for support, carry the conduit to the spot, install the clips, one for every 10 ft. and fasten up the lengths. It also includes time for non-productive labor. If the lengths are short runs, the procedure may be slightly different, but the time remains the

same. No time units are included for couplings, bushings, clips, and straps, particularly since the labor on these items is included in the conduit run.

To install a ground clamp includes one soldering operation, and 12 minutes is allowed. Elbows require one or two fastenings and in addition one extra cut of conduit and a slight additional labor for wire fishing. The figures of 6 minutes per elbow on wood and 24 minutes on concrete take this into consideration.

A tee fitting nine out of ten times requires two fastenings and two soldered joints wrapped and taped. Hence, we allow 36 minutes for this fitting. And in similar manner, all of the remaining fittings are handled.

TWO-WIRE RACEWAY AND FITTINGS UNIT LABOR COSTS

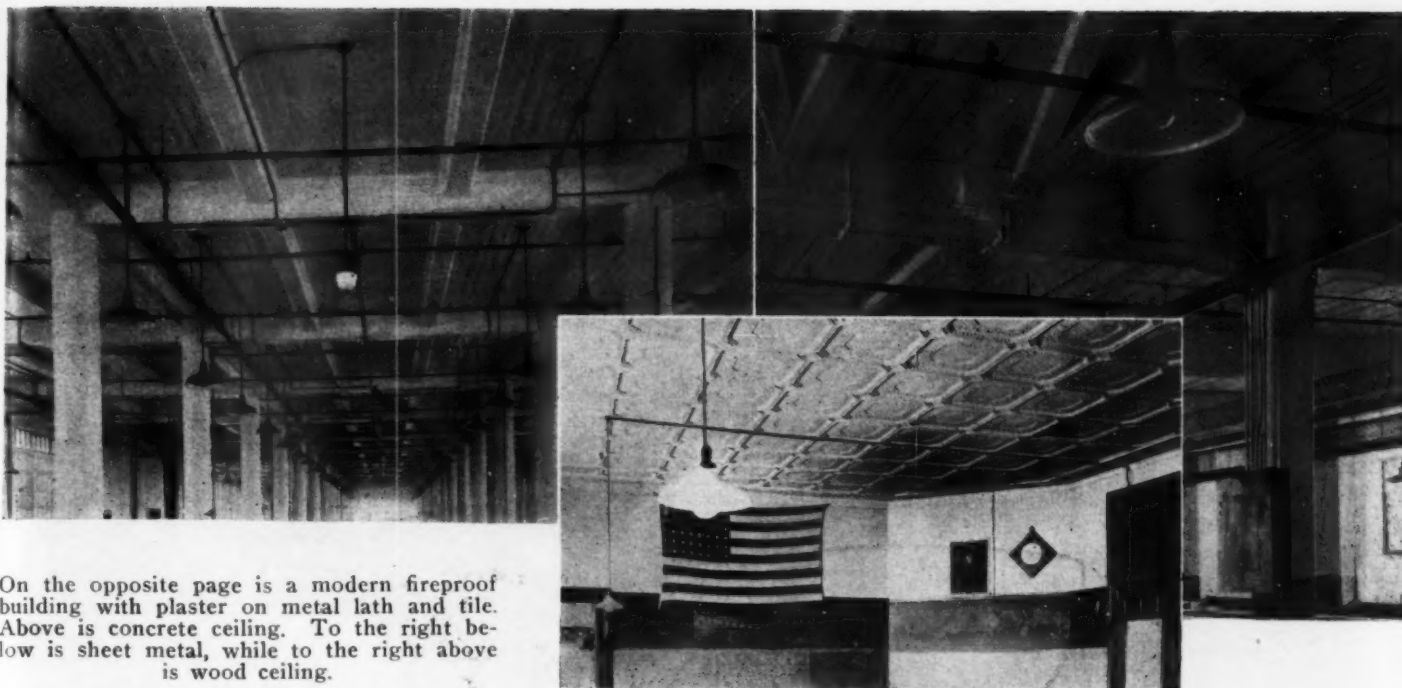
Article	Hours Each Per Mechanic		
	Wood Lath Plaster	Metal Lath	Brick Concrete Tile or Stone
2-wire conduit including coupling, bushing, clip, one screw strap and connection cover..	2½ per C	3 per C	4.5 per C
Ground clamp .....	.2	.2	.2
90° flat elbow .....	.1	.12	.3
45° flat elbow .....	.1	.12	.3
Tee .....	.6	.7	.8
Cross .....	.65	.75	.9
Internal elbow .....	.1	.12	.3
External elbow .....	.1	.12	.3
Corner box .....	.5	.5	.85
One piece rosette .....	.4	.5	.6
Two piece rosette .....	.3	.4	.5
Fixture rosette .....	.4	.5	.6
Combination rosette .....	.4	.5	.6
Contact block .....	.05	.05	.05
Receptacle base .....	.4	.5	.6
Keyless Receptacle .....	.3	.4	.5
Attachment plug .....	.3	.4	.5
Cover for outlet boxes			
2½ in. outlet box .....	.3	.4	.6
3 in. outlet box .....	.3	.4	.6
Covers for extension and fixture boxes			
4¾ in. extension box .....	.5	.5	.5
4¾ in. fixture box .....	.5	.6	.7
Shallow flush switch box.....	.6	.7	1.0
Shallow push switch box.....	.6	.7	1.0
Adapter plate and cover.....	.2	.2	.2
2-gang adapter plate and cover	.25	.25	.25
3-gang adapter plate and cover	.3	.3	.3
Box connector ½ in.....	.05	.05	.05
Conduit coupling ½ in.....	.05	.05	.05
Elbow box connector ½ in....	.15	.15	.15
Conduit elbow ½ in.....	.15	.15	.15
Combination connector .....	.3	.35	.5
Open work coupling.....	.2	.25	.4
No. 14 SBRC wire.....	.5 hr. per 100 ft.		
No. 12 SBRC wire.....	.6 hr. per 100 ft.		
No. 10 SBRC wire.....	.7 hr. per 100 ft.		
No. 8 SBRC wire.....	.8 hr. per 100 ft.		
Fused switch 30-amp., 3-pole	1.5	1.75	2.0
Fused switch 30-amp., 2-pole..	1.0	1.25	1.5
Distribution panel per 30-amp. circuit .....	.5	.6	.8
For ceilings 13 ft. and over in height, add 15% to the total labor item.			



The labor figures given in the accompanying tables are the time that it would require a good, competent and efficient mechanic to do this work with proper guidance and supervision. They include unproductive labor and when a statement is made that it requires ½ hr. to install a 4¾ in. extension or fixture box, it means that the actual labor to do this work is more nearly ¼ hr. and that the other ¼ hr. includes the non-productive time spent which is always present on every piece of work.

RISER RACEWAY AND FITTINGS UNIT LABOR COSTS

Description	Hours Each Per Mechanic		
	Wood Lath Plaster	Metal Lath	Brick Concrete Tile or Stone
9 No. 14 wire conduit including base coupling, bushing and one or two hole strap	5 hrs. per C	6 hrs. per C	8 hrs. per C
Ground clamp including soldering .....	.2	.2	.2
90° flat elbow .....	.3	.35	.5
Internal elbow .....	.3	.35	.5
External elbow .....	.3	.35	.5
Distribution box includes			
splices .....	.5	.6	.7
Adjustable offset connector...	.3	.35	.5
No. 14 SBRC wire.....	.5 per 100 ft.		
No. 12 SBRC wire.....	.6 per 100 ft.		
No. 10 SBRC wire.....	.7 per 100 ft.		
No. 8 SBRC wire.....	.8 per 100 ft.		
No. 6 DBRC wire..	1.0 per 100 ft.		
2-pole 60-amp. enclosed switch	2.5	2.75	3.0
3-pole 30-amp. enclosed switch	1.5	1.75	2.0
2-pole 30-amp. enclosed switch	1.0	1.25	1.5
60-amp. enclosed 2 ph. fused cutout	2.5	2.75	3.0
30-amp. enclosed 3 ph. fused cutout	1.5	1.75	2.0
30-amp. enclosed 2 ph. fused cutout	1.0	1.25	1.5
30-amp. distribution panel circuit	0.5	0.6	0.8
For riser construction allow per floor cut through.....	1-2	1.5-2.5	2.0-3.5



On the opposite page is a modern fireproof building with plaster on metal lath and tile. Above is concrete ceiling. To the right below is sheet metal, while to the right above is wood ceiling.

Labor Hours Vary with the Character of Ceilings and Side Walls.

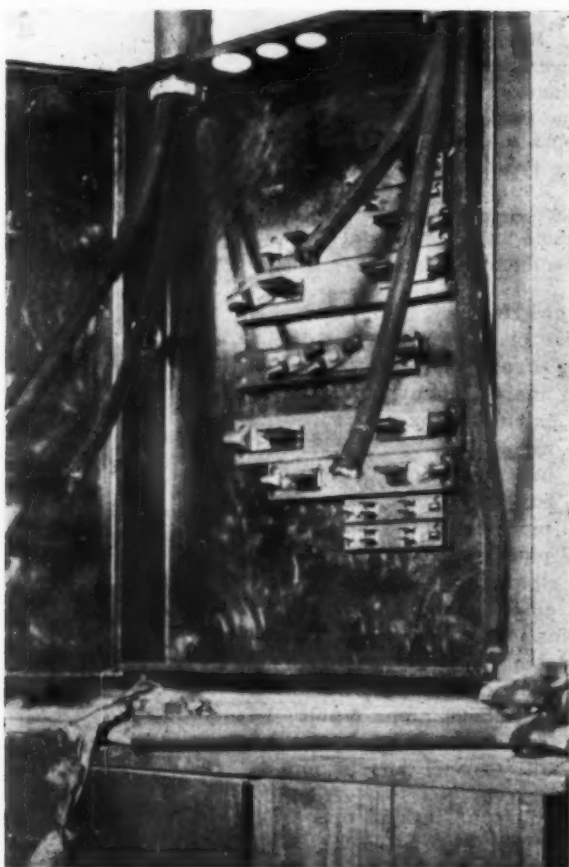
4-WIRE RACEWAY AND FITTINGS UNIT LABOR COSTS

Article	Hours Each Per Mechanic			Article	Hours Each Per Mechanic		
	Wood Lath Plaster	Metal Lath	Brick Concrete Tile or Stone		Wood Lath Plaster	Metal Lath	Brick Concrete Tile or Stone
4-wire conduit, including coupling, bushing, clip, one or two hole strap, connection cover and multiple strap...	3 per C	3½ per C	5 per C	4¾ in. extension box	.5	.5	.5
Ground clamp, includes labor soldering	.2	.2	.2	4¾ in. fixture box..	.5	.6	.7
90° flat elbow	.1	.12	.4	6¾ in. fixture box..	.5	.6	.6
45° flat elbow	.1	.12	.4	6¾ in. extension box	.5	.5	.5
Tee	.6	.7	.8	Combination box ..	.45	.55	.65
Internal elbow	.1	.12	.4	Shallow switch and receptacle box ...	.4	.5	.6
Elbow pull box	.1	.12	.3	Surface type switch box .....	.4	.5	.6
External elbow	.1	.12	.3	Shallow surface receptacle box .....	.4	.5	.6
Corner box	.65	.75	.85	Shallow flush switch box .....	.6	.7	1.0
Narrow fitting	.6	.6	.6	Push switch box ...	.6	.7	1.0
Show case outlet	.6	.6	.6	Adapter plate and cover....	.2	.2	.2
Rosette	.25	.3	.5	2-gang adapter plate and cover	.25	.25	.25
Combination rosette	.3	.4	.5	3-gang adapter plate and cover	.3	.3	.3
Receptacle base	.35	.45	.55	Blank extension box .....	.2	.2	.2
Keyless receptacle	.25	.35	.45	Chase nipple .....	.05	.05	.05
Plug receptacle	.25	.35	.45	½ in. box connector.....	.05	.05	.05
Utility box	.35	.45	.65	¾ in. box connector.....	.05	.05	.05
Condulet type utility box....	.4	.5	.7	½ in. pipe connector.....	.05	.05	.05
Contact block	.05	.05	.05	¾ in. pipe connector.....	.05	.05	.05
Cover for outlet box	.05	.05	.05	½ in. elbow box connector...	.15	.15	.15
2½ in. outlet box.....	.3	.4	.6	½ in. elbow conduit coupling	.15	.15	.15
3 in. outlet box .....	.25	.35	.55	Combination connector .....	.3	.35	.5
Closed extension box .....	.35	.35	.35	Adjustable offset connector..	.2	.25	.3
Distribution box .....	.5	.6	.7	Open work connector .....	.2	.25	.4
Blank cover for extension box	.05	.05	.05	Fused switch 30 amp., 3-pole	1.5	1.75	2.0
No. 14 SBRC wire.....	.5 per 100 ft.			Fused switch 30-amp., 2-pole	1.0	1.25	1.5
No. 12 SBRC wire.....	.6 per 100 ft.			Distribution panel per 30-amp.			
No. 10 SBRC wire.....	.7 per 100 ft.			circuit .....	.5	.6	.8
No. 8 SBRC wire.....	.8 per 100 ft.			For ceilings 13 ft. and over in height, add 15% to the total labor item.			



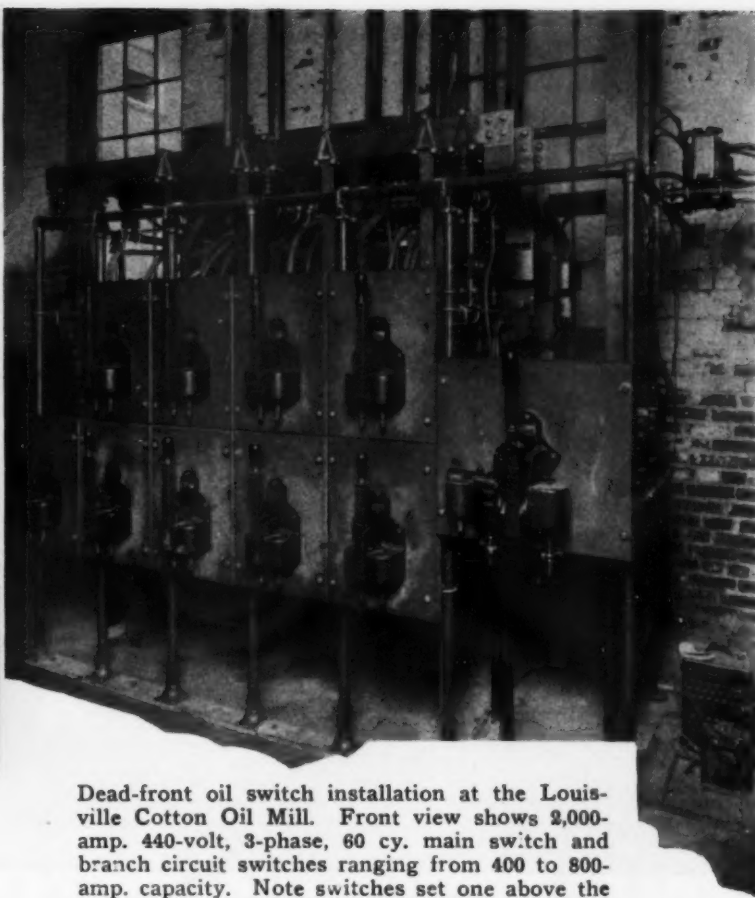
Buss bar power entrance in the Coca Cola Bottling Works, 800-amp. 220-volt, 3-phase, with 1,000-amp. oil circuit breaker for main protection. All branch circuits fed from enclosed type safety switches.

The Work of



Unlike Electrical Contracting on a Small Scale, Power Work Cannot Be Handled on a Shoe-String. It Is Profitable, But It Requires Investment as well as Knowledge. The W. C. Krauth Electric Co., of Louisville, Ky., in Order to Specialize in the Industrial Field and Do the Type of Work Here Pictured, Maintains a Large Shop with Several Thousand Dollars Worth of Machinery for Motor Service, Winding and Rebuilding, and for Building Switchboards

Distributing cabinet being installed in the machine-room of the C. Lee Cook Mfg. Co., shows method used to save time and labor in additional connections, as well as avoiding the unsightly lumps resulting from cutting new circuits and taping them up. By installing the neutral block seen in the center of the cabinet and connecting all grounded conductors to it, it is not necessary to connect and solder all the grounded conductors together in the branch cabinets. This eliminates the opening of a joint every time a circuit is taken off or added. With the neutral block, additions can be made without disturbing any of the other connections. All wires connected to the neutral block have a lug soldered on them.

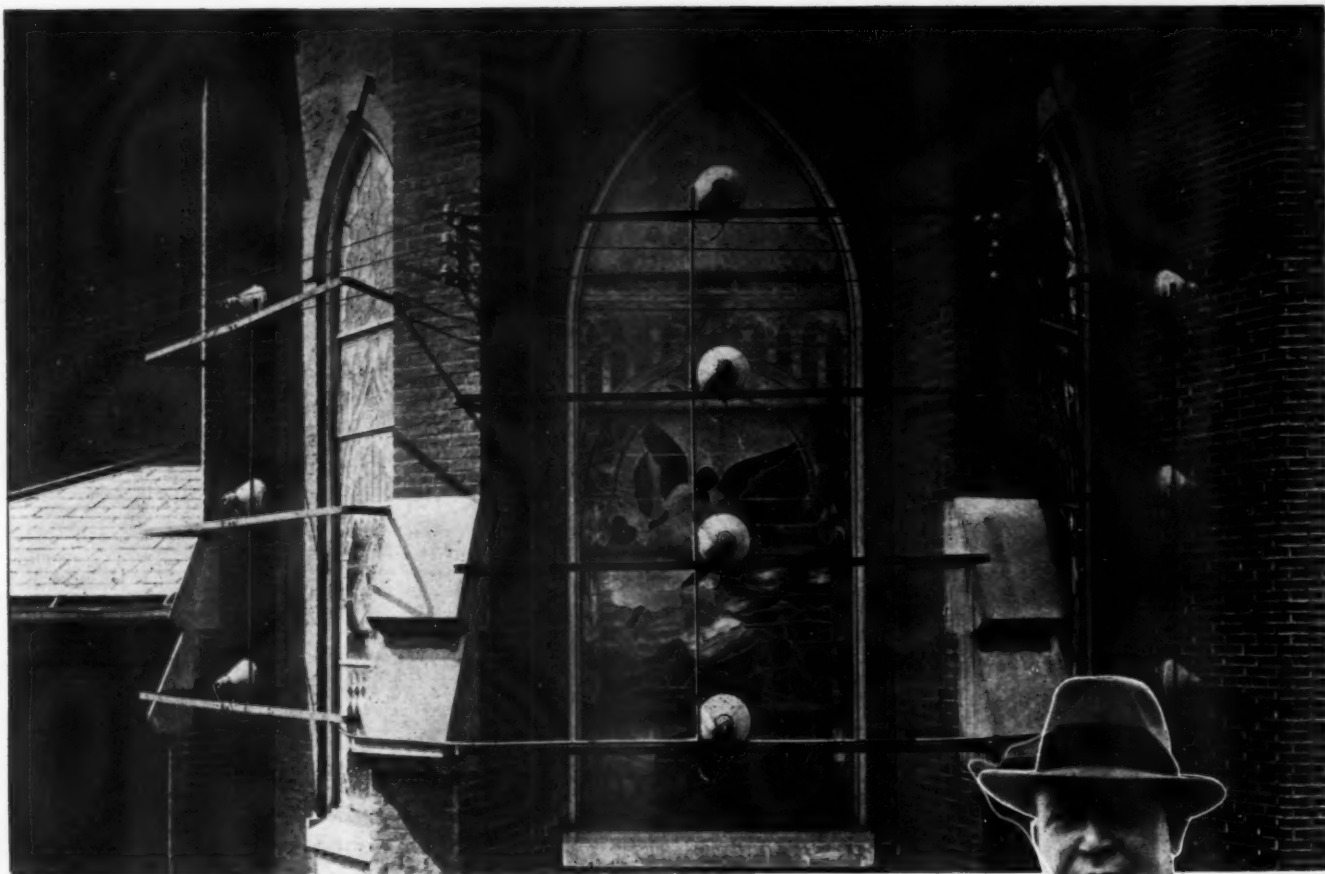


Dead-front oil switch installation at the Louisville Cotton Oil Mill. Front view shows 2,000-amp. 440-volt, 3-phase, 60 cy. main switch and branch circuit switches ranging from 400 to 800-amp. capacity. Note switches set one above the other for economy of space. Rear view shows upper tier of tanks set back away from lower tier, thus eliminating danger in servicing.

POWER Specialist

A 1,600-amp. 12-volt plating generator, direct connected to a 25 H. P. 220-volt, 3-phase motor, complete with panel. Bare buss bar construction is being installed, two $\frac{1}{4} \times 3$ in. bars in parallel. This generator is used to deposit the copper coating on rolls for pictorial printing.





To maintain a steady play of light on the windows it was necessary to eliminate vibration as far as possible. This was accomplished by using 2 in. by $\frac{1}{4}$ in. flat irons, as shown, bolted to the wall with $\frac{3}{8}$ in. by 6 in. lag bolts. The flood lights are bolted to the iron with two $\frac{1}{2}$ in. by 2 in. bolts. The units project approximately 2 ft. 10 in. from the windows and are fed by a line of conduit which serves further to strengthen the installation. From the units to the conduit weather proof wire is used.



Fred W. Schill, who designed the layout, head of Schill Electric Co.



VIBRATIONLESS Floodlight Mounting

Schill Electric Co., electrical contractors of Louisville, Ky., have received much favorable comment on their installation of 10 G-30, 250-watt floodlights for lighting the stained glass windows of St. John's Evangelical Church.

Interior view of windows behind the altar showing how the lighting makes every detail as clear as in a painting.

ELECTRICAL



"There's a bolt missing here," says John Huber, of Wm. C. Krauth Electric Co., Louisville, Ky., to Art Kleinstuber, helper. "Ask Bob to put one in." So—



—Bob Campbell, foreman, obligingly makes the correction and starts up the other ladder with the fitting cover. The ladder suddenly turns slightly, his weight swings him around and—



—down he goes to lie temporarily stunned at the foot of the fence, while his men scramble down to—

ONE out of Every TEN Accidents Caused by FALLS *from* LADDERS

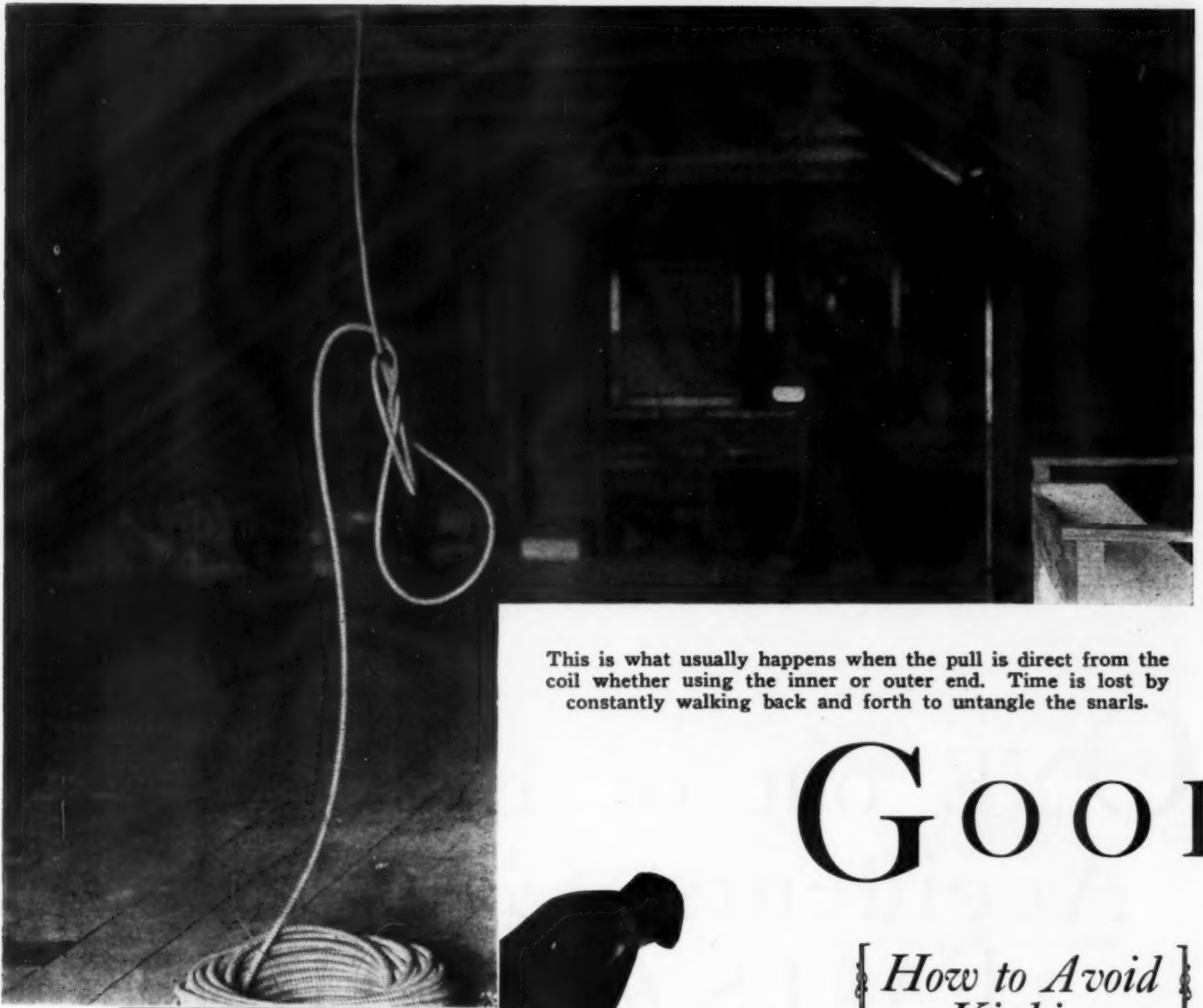
—lift him out from between the pipe and the fence and—



Ladder accidents are caused by broken rungs, home-made contraptions, unsteady stepladders, carelessness on the ladder as shown, and many other ways. With a little effort electrical contractors can lessen the number of this type of accidents. While they cause ten per cent of the number of accidents suffered by wiremen, they account for 20 per cent of the claim payments and therefore of the compensation premium.

—take him away with a badly wrenched leg and plenty of bruises.





This is what usually happens when the pull is direct from the coil whether using the inner or outer end. Time is lost by constantly walking back and forth to untangle the snarls.

GOOD

[*How to Avoid Kinking*]



Leave the cable free to travel by running it out across the floor. It can now be pulled from any part of the building without tangling. By placing the coil at one end of building and running out about 25 to 30 loops, the job can be wired without the usual moving of coil from room to room.



Double the strap over the cable, start the nail, then pull cable up tight, either over or in back of the next joist, and when taut drive home the nail. Use the strain straps on every fourth joist, filling in after cable is taut.

Armored Cable

WIRING

*{ How to Make
Runs Taut }*

By using a $\frac{1}{2}$ -in. pipe strap doubled over, there will be only one nail to drive, and it will be found that they clinch better than the $\frac{3}{4}$ or $\frac{1}{4}$ in. straps, giving a taut run instead of the so-called "clothes-line" run.



One of Iowa's Well-to-Do Electrical Contractors, A. C. Sweetman of Waterloo, Attributes Much of his Success to his Reduction of Loss from Wasted Time. Under his Method of Job Supervision There is no Waiting, on the Part of Mechanics, for Instructions, Material or Tools.

Upon receiving a contract, Mr. Sweetman first goes over the plans with his general foreman. They discuss in detail any special problems appearing on the drawings.

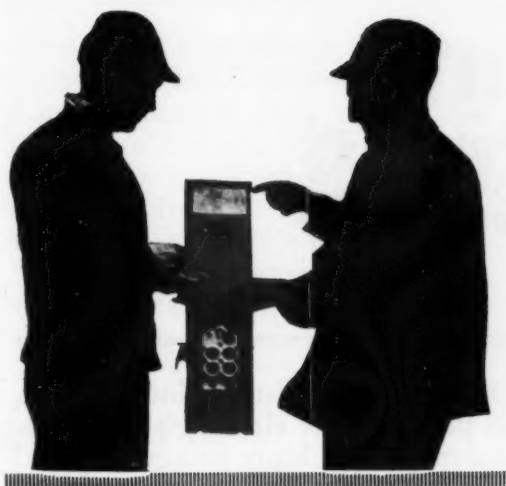


SUPERVISION



His draughtsman then makes a set of working drawings and specifications of sizes and types of material. Workmen waste no time taking off material from a blueprint; they merely check against requisitions to see that material delivered is correct.

The general foreman instructs sub-foremen how the job is to be installed by the mechanics.



The sub-foremen tell the mechanics where to work and what to do.



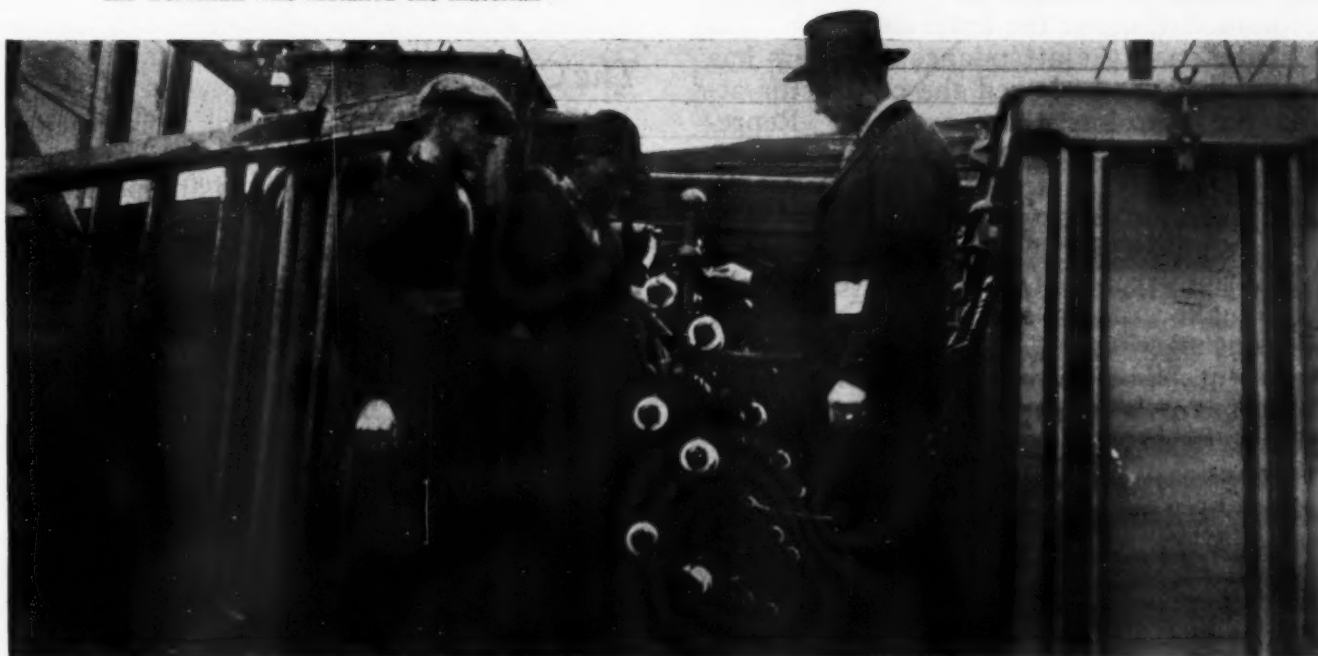
The general foreman requisitions all material from the stock-man.

Reduces WASTE TIME



The boss, A. C. Sweetman, inspects the finished job with his general foreman and the workman who installed the material.

Stock-man checks out all shop tools to workmen.



Electrical Contracting

With Which Is Incorporated The Electragist

S. B. WILLIAMS

Editor

The Power of Talk

TEN years ago there were few convenience outlets installed. Today, every room in a house has at least one, generally more. And this was done by talk! Convenience outlets were suggested to the public by various means until they became the rule rather than the exception.

Now, let's talk the public into having the homes of the country rewired and relighted. Let's suggest it—suggest it again and again, and again. And again we shall see the power of talk.

By Invitation Only

MANUFACTURERS, jobbers, central station representatives and others, who are not contractor-dealers, may attend the Electragist Convention this fall only upon invitation from the Association. This not only means attendance at the sessions, but accommodations at the hotel as well.

In the past, the attendance of others has so greatly overshadowed the contractor attendance as to hurt the convention. Representatives of manufacturers, intent upon entertaining the contractors, have vied with each other for his attention, to the end that he lost sight of the thing he came for.

It is the purpose of the executive committee to make the 1929 Electragist Convention a serious meeting, full of purpose and accomplishment. This cannot be done if the contractors are being lavishly entertained by manufacturers, and others, in their rooms.

This is a step in the right direction. The appearance of large numbers of manufacturers' salesmen is not essential to the success of an electragist convention—if anything, the experience of the past has shown them to be a hindrance. It is true that the Association promoted exhibitions as a

means of financing the conventions. That, however, is past and the electragists are going to be independent. More power to them! They will undoubtedly find the results very gratifying. It may result in some contractors staying home who were attracted only by the manufacturers' hospitality. Better so. On the other hand, it should bring men of the settled, industrious kind—those whose presence is really wanted at the convention.

Back Scratching

INVARIABLY, when the Detroit Credit Plan is discussed with jobbers, they ask if the contractors intend to back up the cooperating jobbers with patronage.

It is doubtful if that could be made part of any written agreement, but if the contractors want the jobbers to play ball, they too must play ball.

It's simply the old story of "you scratch my back and I'll scratch yours."

The Cheapest Way

AN interesting discussion took place recently between some electrical contractors about the relative cost of good and poor wiring. The subject of materials was not considered—merely the quality of workmanship. The interesting part of the discussion was the conclusion by all that poor wiring costs the contractor more than good wiring.

In other words, good wiring presupposes good workmen, planning, supervision, thought, minimum of wasted time and material, and the right tools. Poor wiring is the natural result of poor workmen, carelessness, lack of system or supervision, loafing, poor tools, high non-productive labor.

Good wiring is an advertisement and helps to attract other work. Poor wiring increases the sales resistance for future work.

To set a box plumb, to hang a fixture straight, to run armored cable taut instead of in festoons, to make even, short bends in conduit—all marks of good workmanship—requires only a little method, and once one has the method, it takes far less time than poor work installed without method.

So in wiring, like in everything else, the best is the cheapest.

Stand on Your Own Feet

THE electrical contractor will never take his rightful place in the electrical industry until he stands on his own two feet and demands as a free man what is his just due. Just so long as he is satisfied to accept hand-outs from his power company and others, just so long will he be considered as one of the poor relations—and the poor relations never have a speaking part in the family councils.

The contractors have lost their independence by permitting others to do things for them until they, themselves, accept the statement that they are too poor to help themselves.

If there is a contractor so poor that he cannot afford to put ten dollars a month into an organization of his own for clearing up local conditions, then he is not to be reckoned as a bona fide contractor. It has been our experience that when a contractor has his back to the wall that nothing costs too much. He will take jobs below cost, giving his profit, and something besides, to the customer. No price, apparently, is too great to pay at such a time for a job. Who then says he can't afford to pay liberally to help himself in a constructive way?

When the contractor organizes in that fashion, paying his way, he will take on a new spirit of independence and those who have been in the habit of "lording it" over him will welcome him as an equal and listen to what he has to say.

So long as he is held in subjection by hand-outs he will never do anything other than whine like other poor relations. When he stands on his own feet, paying his way as he goes, he will make his demands as a free man. Demands are listened to and respected—whines bring only contempt.

The electrical industry owes the electrical contractor an increasing opportunity to do

business at a profit. It is a just debt, but it will never be collected by sniveling tactics—only an individual standing on his own feet, commanding respect, will collect.

Use of White Pipe

A NEW ordinance is being considered by Memphis—in fact, it may be law when this is being read—which requires, amongst other things, the use of white pipe to the exclusion of black.

Some five or six years ago the Association of Electragists urged the conduit manufacturers to standardize on galvanized conduit, claiming that handling the two classes of pipe was uneconomic for the contractor. Later the jobbers attempted to interest the Bureau of Simplified Practice in Washington. At that time the electragists made a fairly extensive survey of preference amongst contractors, architects and engineers, and a good sized sentiment was found in favor of white pipe. The manufacturers, however, have, so far, been disinclined to eliminate black pipe, nor can they, reasonably, be expected to make the change unless they see some advantage in lower production costs, or unless the trade demands the white and refuses the black.

The contractors claim that if the manufacturers will standardize on white pipe that the price will come below the present price for black. That, of course, remains to be seen. It is true, however, that the contractor's investment in conduit and fittings will be materially reduced—and that's something.

Furthermore, the contractors claim that even at no reduction in price, white pipe will lower their wiring costs because of clean threads.

The contractors have a sound reason for wanting white pipe only, and the manufacturers will accede to that demand just as soon as it absorbs a fair proportion of the total production. Today, the manufacturers must produce both because there are certain places where only white can be used. Since there are few places where black is really preferable to white, it is apparent that the manufacturers can standardize white just as soon as the demand warrants it.

In other words, the situation is now largely in the hands of the contractors.

Code Chats

A Monthly Discussion of Wiring Practice and Questions of Interpretation, Presented with a View Toward Encouraging a Better Understanding of the National Electrical Code - - -

Conducted by F. N. M. SQUIRES

Assistant Chief Inspector, N. Y. Board of Fire Underwriters

Omission of Service Grounds

The first part of the third sentence of rule 902-d means simply that where a secondary A.C. system is grounded by a number of individual grounds (that is, a ground as specified in 901-c is provided at each individual service) the inspection department may, for good and sufficient reasons, allow the omission of one (or any) of the individual grounds, providing the others are all intact.

It does not mean that there are other grounds equally as good as those specified in 901-c or that will serve in lieu of those specified.

* * *

Where Metallic Tubing May Be Used

A reader asks if the Code permits installation of electrical metallic tubing in concealed residence work.

Rule 508-i provides the answer when it states that this material may only be installed as exposed work.

Moreover it must not be exposed to moisture; that is, it can be used only in dry locations.

It must not be located where it will be subjected to severe mechanical injury either before or after installation. This would indicate that the mechanical work on a building (new construction or alterations on an old building) must be pretty nearly completed before the tubing may be installed. Further, it shall not be installed where exposed to corrosive vapors. The above we believe to be a lengthy but clear exposition of rule 508-i. There is one point, however,

which section 508 does not mention but which might be borrowed from surface metal raceways, rule 504-h. There would seem to be no more harm in extending the metallic tubing through dry walls or partitions than in doing the same with metal moulding, providing it is in unbroken lengths and providing it meets other requirements of 504-h. However, consult your inspection department before doing so.

* * *

Why No Grounds for Furnace Circuits

Electric furnace circuits are exempted from grounding, 902-e, for two main reasons: First, these circuits are generally quite short as the transformers are usually

placed near to the furnaces, and while they constitute a system it is not a system of any great extent. Generally there is a transformer for each furnace.

Second, the secondary voltage is usually quite low and hence the precautions of grounding are not necessary.

* * *

Bonding Ground Wire to Both Ends of Pipe

The question is often asked: "What is the reason for bonding a bare copper ground wire to both ends of its protective metallic piping as required in rule 906-d?"

There are two reasons for this: First, when metallic surfaces are liable to become accidentally grounded they must be thoroughly



CODE SCHOOL IN YOUNGSTOWN—Code classes, sponsored and maintained by the Electrical Workers Union of Youngstown, Ohio, are being attended by 50 per cent of the apprentices and 80 per cent of the journeymen. This school is the outgrowth of the one started by the same organization ten years ago for its apprentice members. Considerable credit is given T. E. Jones, vocational director of Public Schools for the development and success of this school.

MAJOR

NEW
1929
Catalog!



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The Major Line includes all types of theater lighting equipment, interior

and exterior flood and cove lighting, narrow beam reflectors and accessories. Each product is designed directly for the purpose used and with all the skill of long years of experience.

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Seattle, Washington
St. Louis, Missouri

Tulsa, Oklahoma
Toronto, Ont.
Vancouver, B. C.
Winnipeg, Man.

and effectively connected to ground. There may be fairly good conductivity between a bare wire and the metal pipe it is inside of but the chances are that the connection will be poor. Of course, any considerable current trying to flow through this poor connection will cause undue heating. If, for instance, the ground wire is carrying off a heavy grounded current of a short circuit and the protective pipe is in contact with the ground wire at the upper end but in rather poor contact or no contact at the ground electrode end, quite a potential might easily be imposed on the pipe. To eliminate both of these conditions the substantial connections at both ends are required.

Second is the choking effect of the pipe, with the result that the current will endeavor to jump to the pipe. Of course, when this happens low resistance should be provided between the ground wire and its metallic covering. While this choking effect chiefly takes place on high frequency discharges, these may take place at any time and the grounding system should always be ready.

* * *

Brass Shell Sockets

A constantly reoccurring question is: "Where are brass shell sockets prohibited?"

In 1405-c we find that weather proof sockets shall be employed in damp or wet places or where corrosive vapors exist because of the danger while standing on a damp floor of getting hold of a brass shell socket which has become accidentally "alive." But in applying the rule quoted it is left to the inspector to say whether or not a place is damp or wet.

Some inspectors and some inspection departments have always considered any room, especially one having a cement floor that was below the ground level, to be damp. This, of course, is a rather strict ruling as many places which are below ground are not at all damp. This will always be a much discussed problem and there seems to be no happy solution, as the conditions may be continually changing.

Also in Articles 32, 33 and 34

we find that where portable lights are used in hazardous locations, garages and motion picture studios, the sockets of these portables shall not be of the brass shell type.

* * *

Number of Outlets on Branch Circuits

Objections have been received from various parts of the country regarding the waiving, rule 807-g, of the maximum limit of 12 outlets on a circuit where the floor area served does not exceed 1200 sq. ft.

It is contended that this is a breaking down of the old branch circuit load rule and seems to be undesirable because of the rapidly growing use of appliances. A person wiring a bungalow not exceeding 30 ft. by 40 ft. may apply this rule and use but one branch circuit. He will rate each receptacle and socket at $\frac{1}{2}$ amp. load and place thirty of these on this circuit and he would be right, according to the footnote of 807-g. Then he begins to use appliances and soon the 15 amp. fuse is not sufficient.

Another objection to this waiving of the limit is that it conflicts with rule 613-b(3) in a way. If the Code requires feeders of sufficient size to supply a certain load per unit area, it seems to imply that that load is to be installed.

(Of course, we still must remember that Section 613 deals with feeders only and has no requirements in it for anything else.) By this we would assume that a lighting load of one watt per square foot plus 1000 watts for appliances would be provided; hence the bungalow referred to above would have 2200 watts on that one circuit.

It would help, of course, if the load referred to in 807-g included instead of excluded other than the fixed load which may be connected to appliance outlets, and that some definite but fair load rating be applied to an appliance outlet.

* * *

Rule 613, e, 1928 Code

Interpretation 23.

QUESTION: Section 613, paragraph (e), 1928 Edition of the National Electrical Code. Is the word "final" in the second sentence of this paragraph correct or is there a typographical error, in view of which the word should be "feeder"?

ANSWER: The word "final" as printed in the current edition of the Code is the correct word.

* * *

Accessible Roof Spaces

Interpretation 20.

QUESTION: Shall an attic or roof space into which the only means of entrance is through a small scuttle-hole in the ceiling of a clothes closet be considered as "accessible" in the application of paragraph (q) of section 501, paragraph (g) of section 505, and paragraph (l) of section 507 of the 1928 Edition of the National Electrical Code?

ANSWER: Yes. See definition, Article 1.



PROMOTES SAFE FARM WIRING:—The Iowa Electricists and the Master Electricians Association of Des Moines, jointly exhibited at the Iowa Farm and Home Exposition in January, emphasizing safe wiring construction for rural districts. The barn at the right was kept lighted and a flasher was installed in the house at the left and kept going continuously during the show.

BUSY CONTRACTORS

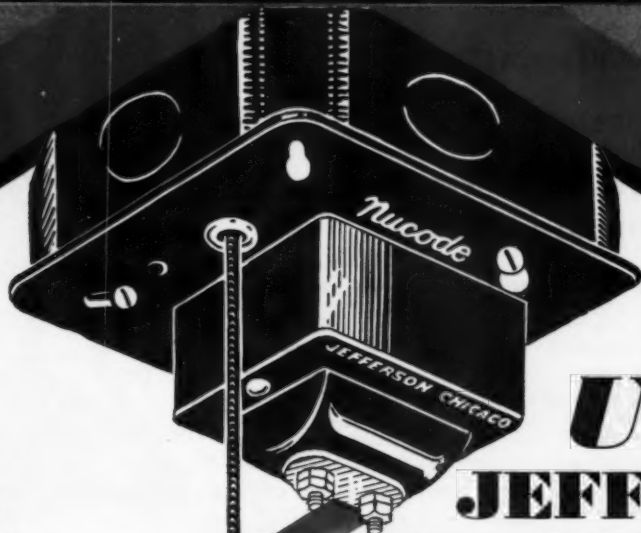
SAVE TIME *and* MATERIAL

**Transformer
and Droplight
Quickly Installed
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JEFFERSON HEAVY DUTY SIGNAL TRANSFORMERS

Wherever heavy, dependable service is essential, Jefferson Heavy Duty Signal Transformers can be used with confidence. They are designed for highest efficiency, lowest operating cost and attentionless service. Perfect balance in construction assures maximum output with low temperature rise. Even on steady heavy duty the rise in temperature is hardly detectable.

Made in capacities from 50 to 500 watts, with a wide selection of secondary voltages.



USE JEFFERSON Nucode Transformers

MOUNTED on outlet box covers—with a knockout for drop-cord—Jefferson Nucode Transformers speed wiring and save material. The installation requires only the splicing of two wires and the tightening of two screws. Conduit, one box and the time for installing extras, are saved—savings which protect profits on low bids.

Nucode is designed for economical operation of bells, buzzers, door openers and annunciators in residences, small flat buildings—and is so highly efficient that it will not actuate the meter when not in use. Furnished with round or square covers, as desired. The round cover fits both 3½" and 4" octagon boxes—the square cover either 3¼" or 4" octagon and 4" square boxes. Listed as standard by the Underwriters' Laboratories.

Any reliable wholesaler can supply you with Jefferson Nucode Transformers. Start using them now—save time and material. Also send for our catalog No. 33 showing the complete line of Union-Gem-Jefferson electrical protecting materials and conduit fittings, for every requirement.

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Jefferson Nucode

BELL RINGING *and* SIGNAL TRANSFORMER

A. E. I.

News and Service Information

*Material for this department is supplied by the headquarters staff of the Association of Electragists, International,
420 Lexington Avenue, New York, N. Y.*

Executive Committee Semi-Annual Meeting

The Executive Committee of the Association of Electragists, International, held its semi-annual meeting at the association headquarters in New York City on March 11 and 12. The two days' deliberation resulted in a broad and constructive program for Association development.

The following rearrangement of standing committee chairmanships was adopted:

Code, A. C. Brueckmann; Central Stations Relations, E. N. Peak; Architects and Engineers, L. E. Mayer; Standardization, L. E. Mayer; Legislation, C. E. James; Membership, E. N. Peak; Publication, J. R. Strong; Wiring Methods, J. R. Strong; International Relations, R. A. L. Gray; United States Chamber of Commerce, L. K. Comstock; Conventions and Meetings, C. L. Chamblin; Credit and Accounting, S. J. Stewart; Radio, E. C. Hedrick; Liability Insurance, J. A. Fowler.

Budget Committee

A budget committee, composed of the president, the general manager and J. A. Fowler, was appointed.

Investments

A special committee on investments, consisting of L. K. Comstock, W. Creighton Peet and Allan Coggeshall, was appointed to study the securities' market and recommend from time to time advantageous investments for the Association's surplus funds.

Convention

It was voted that the 1929 Electragist Convention, to be held at Swampscott, Mass., on Sep-

tember 30 to October 4, will be open only to contractors and dealers and such guest speakers and industry conferees as may be personally invited to attend.

The accommodations at the New Ocean House, Swampscott, which has been reserved exclusively for the convention, are limited to about 500 guests, and rooms will be allotted only through A. E. I. headquarters. No part of the hotel will be allotted for exhibits.

All sessions of the Convention will be for contractor-dealers only, with the exception of one half-day afternoon session to which the entire industry is invited.

Central Stations Relations

The Central Stations Relations Committee was established as a regular standing committee and Earl N. Peak continued as its chairman who recommended that electragists throughout the country be invited to refer local central stations relations problems to his committee. He assured the prompt consideration of such problems through the appropriate committees of the N.E.L.A.

Chapter Jurisdiction

A special committee on chapter jurisdiction, composed of Earl N. Peak, chairman of the Membership Committee, Leo E. Mayer and A. C. Brueckmann, was empowered to pass upon all questions of jurisdiction affecting applications of local associations for charters as chapters or affiliation, or applications for membership in territory where chapters exist, when jurisdiction questions arise.

It was the sense of the com-

mittee that in general the following procedure would prevail on jurisdictional questions:

1. Where a chapter or affiliated association has already been established and jurisdiction awarded, such original organization shall be given the right to pass upon the application of any other organization desiring A. E. I. charter or affiliation in that territory.
2. Applications for individual A. E. I. membership in territory of an established chapter or affiliated association shall be referred to such established local organization for approval.
3. If, in the opinion of the jurisdictional committee, another local association should be eligible for A. E. I. charter or affiliation in any territory, but the application shall not be approved by the existing senior chapter the application shall be referred to the A. E. I. Executive Committee.

Extending Chapters

All chapters were urged to emulate the method used so successfully by Rotary, Kiwanis and other service and fraternal organizations to spread the growth of local associations.

Each local chapter should contact with nearby cities and towns where chapters have not yet been formed, and arrange to visit those cities with delegations of members to attend meetings with the contractor-dealers there, selling the idea of chapter organization and affiliation.

Where local chapters have full-time paid secretaries, arrangements may be made to send the secretary to a neighboring city for a few days to assist in organizing a chapter there. In such cases the International may arrange to help finance the incidental expenses.

Standard Proposals

The need for the preparation of standard proposal clauses was referred to a special committee to be headed by L. E. Mayer,

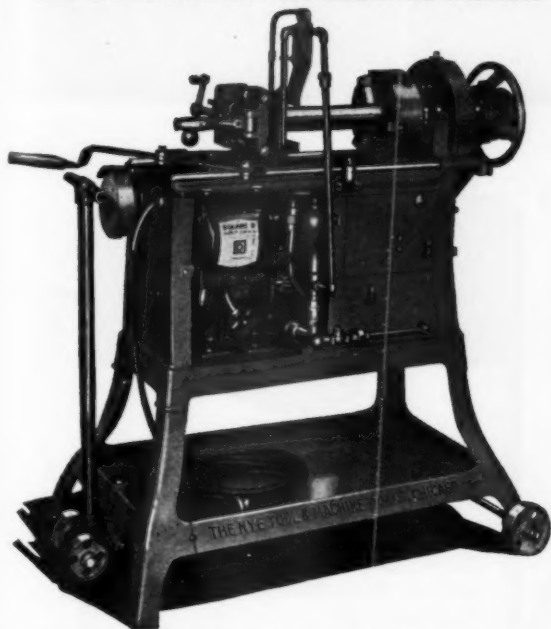
THE CELEBRATED SKIP TOOTH DIE

(Genuine Nye)

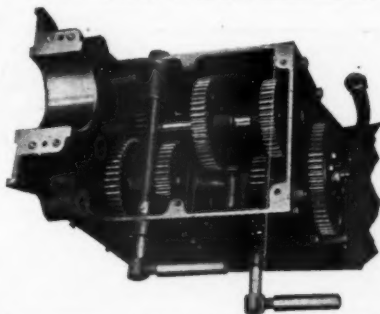
REG. U. S. PAT. OFF.

NYE POWER MACHINES

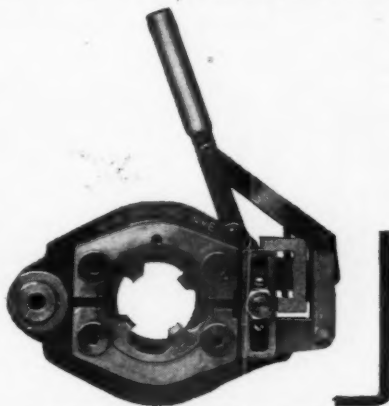
ALL GEAR DRIVEN—NO BELTS OR CHAINS



No. 100—capacity $\frac{1}{4}$ to 2 inches inclusive
No. 200—capacity $\frac{1}{4}$ to $2\frac{1}{2}$ inches inclusive



Gear Case running in oil, assuring perfect lubrication.



QUICK OPENING DIE HEAD
Equipped With Trouble Proof Ring Type Dies
(No Chasers)

A Letter from Harry G. Nye to the Electrical Contractors of the U. S. A.



Fellow Citizens:

Not long ago I asked a young lady friend of mine whether she was going to a party. She said, "I don't know whether I will or not. I have nothing to wear." When I got to the party she was about the first person I saw. "Well," I says, "I see you came, and that you wore it."

Women are funny that way about clothes. They want as few clothes as possible, and lots of them. They think it's fine for a woman to wear a nice dress somewhere, but that she ought to get life for a second offense. It's a dress one week, and a disgrace the next.

Now, men are different. When I'm invited out, I not only have something to wear, but I have it on. If some fellow comes up at the party and says, "Harry, that suit certainly wears like iron," I'm pleased all over. It shows that I know something about picking out clothes.

Of course, I say modestly, "Yes, wears like iron, and looks like it." But I feel complimented just the same. It proves that I know a good piece of woolen when I see it, although I don't. But if anybody told my wife or Julia that a dress of theirs wore like iron, they'd pass out.

I don't know what we are going to do with these women. They not only want all new clothes themselves, but they don't want us men to have any old ones. They've put a curse on anything comfortable. About the time a man gets something broke in, they break out.

I've got a cap that I've fished and hunted in for five years, and also beat carpets when I didn't make my getaway quick enough. But every time I put it on there's a riot. My wife says she's going to burn it up. Fine thing, when a man has to put his old clothes in the safety deposit.

I see some of the women have taken to smoking. But I know this: No woman will ever break in a meerschaum pipe. About the time she began to get a color on it, she would want a new one. But a pipe doesn't begin to taste good until it begins to smell bad. Women don't understand such things.

So don't tell your wife that you use Nye Tools. They last so much longer than any others she would want you to buy new ones right off. Which would be all right with me, of course, if you bought Nye's.

Yours faithfully,

Harry G. Nye

Otherwise Known As

The Nye Tool & Machine Works
4120-30 Fullerton Avenue Chicago, Ill.

Copyright, 1928, by Harry G. Nye.

All rights reserved

THE CELEBRATED SKIP TOOTH DIE

(Genuine Nye)

REG. U. S. PAT. OFF.

INCREASES SAFETY



"Anti-Short"

A split sleeve of red insulating fibre. Bushes cut end of armor and are additional insulation between armor and conductors.



GENERAL

MERCHANDISE DEPARTMENT

SPEEDS WIRING..

Protects against Grounds ~ THE NEW General Electric "BX"

REG. U.S. PAT. OFF.

TYPE A.—B.—C.
ARMORED BUSHED CABLE

Crosssection of "BX" shows wrapping of Kraft Armor over conductors and interlocking steel armor.



Removing steel armor from end of cable shows compact Kraft Armor over conductors which provides maximum protection.



"Anti-Short" Bushing between conductors and steel protects against grounds.

The "Double Armored" construction of the new General Electric "BX" Type A.B.C. Cable consists of a flexible steel outer armor and a Kraft Armor between steel and conductors.

The Kraft Armor requires no tools to remove and strips automatically to provide space for the "Anti-Short" Bushing.

The insertion of the "Anti-Short"

between the sharp edges of steel and the conductors is a quick hand operation. The "Anti-Short" protects the insulation at the most critical point of installation; speeds wiring and insures contractors against "no pay" repairs.

The new General Electric "BX" Type A.B.C. Cable and "Anti-Short" Bushing protect against grounds, increase safety and facilitate wiring.



ELECTRIC

BRIDGEPORT, CONN.

with instructions to gather from every source possible the clauses now in use and report back at the next meeting.

Commercial Arbitration

The functions of the American Arbitration Association and the significance of the Draft State Arbitration Act were outlined and the committee went on record as endorsing the "principle and practice of arbitration for the speedy, efficient and economical settlement of business disputes," and recommended that all local chapters take whatever steps possible to support the adoption of the Draft State Arbitration Act in every state where it has been introduced.

Standard Symbols

Requests from the field for the revision of the Standard Wiring Symbols, to take care of new kinds of wiring, resulted in the matter being referred to the Standardization Committee for investigation, and the preparation of tentative standards.

Mechanics' Lien Acts

The committee went on record as being vitally interested in the progress of legislation for adequate State Mechanics' Lien Acts, and recommended that all local chapters give attention to the securing of such legislation and the study of the proposed Standard Mechanics' Lien Acts being drafted by the United States Department of Commerce.

Accident Prevention

A resolution was adopted requesting local chapters and affiliated associations to establish accident prevention committees to study corrective methods locally.

* * *

Trade Commission Advocates Licensing Associations

That the Federal Trade Commission has made a recommendation to the Senate for Government supervision of trade associations to prevent price-fixing and yet permit associations to continue their constructive influence in business, was reported to the

A. E. I. Executive Board by General Manager L. W. Davis.

The trade commission has also recommended that a licensing system be instituted so that trade association activities may become better known to the Government and so that certain activities which come close to a violation of the anti-trust laws may be eradicated.

The commission feels that the circulation of price information "in a form to identify the results for individual members is so unnecessary to the general statistical work of associations and so susceptible of abuse that it might be explicitly declared illegal irrespective of intent."

"It is undoubtedly better," says the commission, "for the trade association if its members, as such, do not have too concentrated or exclusive an interest in prices. Conditions and circumstances under which the prices are arrived at may be properly a subject of regulation and of group decision, but seldom the specific price itself on a specific commodity."

Managers Need Advice

"A frank and above-board interest in the standardization of certain practices that practically, and, too often covertly, affect costs to the buyer is a field for trade association activity of much promise. To keep such work free from the taint of conspiracy and illegal restraint of trade is, however, an important task for the permanent pilots of trade association and one on which they apparently need outside advice and assistance."

The foregoing is in line with the policy which has been advocated by the attorney general's office to the effect that business organizations and corporations deserve the cooperation of the Government when they seek advice as to whether their activities are contravening anti-trust laws and how they may make their practices conform to the spirit and letter of the law. The trade commission's report may be the basis of recommendations as to trade practice legislation in the next session of Congress.

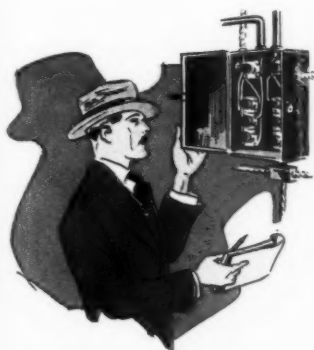


BOOTH HELPS SELL RED SEAL IDEA:—Sherman Vogt, secretary of the Louisville, Ky., Electric Club, reports that the booth idea has proved itself to be a great help in getting the Red Seal Plan over to the general public. The booth here pictured was used at the "Better Homes" exhibit January 16 to 23 last. Talks on Red Seal were made to hundreds of visitors, each of whom carried away literature on adequate wiring of the home. Samples of appliances for which adequate wiring is installed were also shown attached by ribbons to duplex convenience outlets.



"Colortop" Fuses

Fast Seller—Nearly 7,000,000 Sold in 7 Months



The inspector's duties are simplified where TRICO "Colortop" fuses are installed. He can tell at a glance if everything is OK.

It's Easy Now to Know the Capacity of a Fuse Instantly by its Color

**Simplifies Inspection, Makes Easy Selection
and is Instructive to Users.**

A help to the storekeepers, stock-clerks and others to select and know the sizes on the shelf and bins quickly. They're packed in 5-unit cartons to facilitate merchandising—have the clear mica window that shows when they blow—and possess the qualities of large center contact, full threaded heavy shell and all porcelain non-shock top. No additional charge for the colored top.

Suggestion to Users: Paint the cut-out the same color as the "Colortop" fuse used. This will assure correct fuse replacements. No guess-work. No possible mistakes.



No guess-work, no time lost, when storekeepers supply electricians with TRICO "Colortop" fuses. The capacity is known by its color.



The perplexity of the consumer guessing the size fuse wanted is eliminated where TRICO "Colortops" are sold. Replacement fuses are bought by their colors.



A colored band around the edge of each 5-unit carton indicates the capacity of the fuse the box contains. (6 Distinct Colors)



TRICO "Colortop" fuses now enable trouble shooters to select instantly the correct fuses from a bag or box of mixed fuses.

Free Samples on Request

Your jobber can obtain TRICO "COLORTOP" fuses for you if he does not have them in stock.

Trico Fuse Mfg. Co., Milwaukee, Wis.

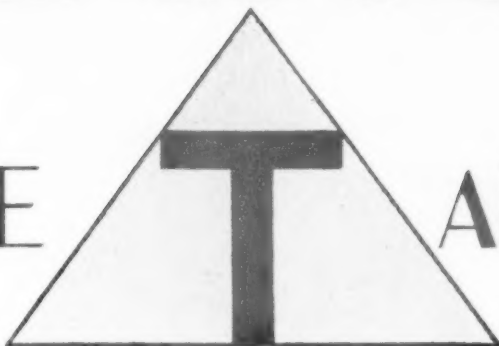
Let this serve
as your guide

WARNING! The Colored Top for fuse plugs is fully protected.

Approved by Underwriters' Laboratories, Inc., Hydro-Electric Power Commission of Ontario, and the following: Modern Priscilla, Good Housekeeping Institute, Herald-Tribune Institute, and Associated Factory Mutual Fire Insurance Companies.

TRIANGLE

SAFE



ARMORED

CABLE

A Triangle Triumph



SUPREME 1 IN SIMPLICITY AND 2 SAFETY

A Base of full-sized annealed copper wire encased in a National Electric Code rubber compound. Over the compound is placed a sleeve of tough fibrous impregnated paper. Over this is a heavy cotton braid treated to repel moisture. Dielectric strength conductor to armor is *four* times, and between conductors, *six* times ordinary double braid insulation.

ARMORED CONDUCTORS
(round, flat and leaded)

"TRIEX"
(non-metallic sheathed cable)

NON-METALLIC FLEXIBLE

CONDUIT
RIGID STEEL CONDUIT

3

This construction is unique also in that after the removal of the armor, the fourfold protection on each conductor extends right to the splice or connection, increasing the safety factor at the outlet box 400%.

The need for an over-all braid is eliminated, as protection is given to each conductor which is actually more than equal to any approved armored cable with an outer braid,—an added advantage and a safety factor in that there is no outer braid to remove.

FLEXIBLE STEEL CONDUIT
RUBBER-COVERED WIRE

RUBBER-COVERED
LEAD-ENCASED WIRE

TRIANGLE
ARMORED CABLE TOOL

Triangle Conduit Co., Inc.

General Offices: Dry Harbor Road & Cooper Ave., Brooklyn, N. Y.

Factories

Brooklyn—Chicago—Butler, Pa.

In Canada

Triangle Conduit Co., Ltd., Toronto

In the Editor's Mail



Is He Out of Line?

Editor,

ELECTRICAL CONTRACTING:

I have been in the electrical business for 28 years and for a time before the war, my business was growing. During the war it fell off, then for two years following, it again picked up, but since then the business seems to be getting away from me. I know I have had a reputation for being high, but then I am not satisfied to do any but the best kind of work. Please tell me if I am out of line.

I am a subscriber to ELECTRICAL CONTRACTING and consider it the only paper of its kind worth reading, and as your magazine is for the contractors and good estimating, I am sending you a nearly accurate check on material and labor on a job that was actually done.

I would like your personal opinion and that of your readers. In regard to this job there are several questions I would like to have answered: Is the contract price too high? Is the cost per outlet too high? Is the labor per outlet too high? Is the material used per outlet too high? Am I looking for too much profit?

It is to find out what is the matter that I am writing you this letter and sending this typical job check.

Springfield, Mass., Subscriber.

Construction

Concrete foundation, frame construction with steel girders under all bearing partitions. 2700 ft. floor space above cellar. Attic unfinished, but steam, water and electric outlets provided for future use if needed. All outlets spaced exactly as to height and distance from casings, base outlets in center of baseboard. Cellar wires run straight, and square corners where turns are made, the same properly fastened in place. Joists above cellar were bored to receive cables, each room was fed from two or more different circuits to eliminate darkening of room if one fuse should blow. House was roughed and tested for grounds, shorts and circuit. Before floors were laid, switches and receptacles were installed and later, after decorating was done, but before floors were finished, plate bells, etc., were put on, completing job. Job was again tested for trouble.

Schedule of Cost

Labor on this job includes time to get out stock and return credits to their proper place.

Item	Unit Cost	Total
<i>Rough work</i>		
51 hours labor.....	\$1.125	\$ 57.38
954 ft. No. 14-2-B.X.....	.032	30.53
118-ft. No. 14-3 B.X.....	.068	8.02
17-ceiling boxes stud & clamps .....	.30	5.10
9-gemX boxes .....	.096	.87
3-outlet plates .....	.09	.27
3-3 in. rd. boxes.....	.07	.21
3-T & B 3/4 in. connectors .....	.035	.11
55-brkt. wall cases.....	.16	8.80
<i>Service</i>		
1-duct box, lags & sleeves		2.00
1-60 Amp. service sw. & fuse		4.27
4-hours labor	1.125	4.50
6-ft. No. 8 wire.....	.022	.13
2-1/2 in. nuts & bush....	.02	.04
18 ft. No. 6 wire.....	.04	.72
10-ft. 1/2 in. conduit.....	.0676	.68
<i>Finish</i>		
2-meter devices	2.46	4.92
1-7 inch trough.....		.48
6-ft. 3/4 in. greenfield....	.09	.54
6-3/4 in. T & B connectors .....	.17	1.02
30-ft. No. 8 wire.....	.022	.66
1-4 circuit surface panel.		1.65
1-8 circuit surface panel.		3.52
8-3 in rd. boxes.....	.07	.56
1-3 in. blank cover.....		.05
150-ft. No. 14-2 B.X.....	.032	4.80
28 T & B 3/4 conn.....	.0265	.74
12-fuse plugs .....	.0265	.32
16-S. P. sw. flush.....	.21	3.36
10-3-way flush .....	.28	2.80
1-3-way surface sw.....	.26	.26

Item	Unit Cost	Total
<i>Finish, Cont'd</i>		
22-duplex receptacles & plates .....	.225	4.95
11-No. 1 sw. plates.....	.06	.66
3-No. 2 sw. plates.....	.12	.36
3-No. 3 sw. plates.....	.18	.54
Bell system total.....		4.55
Tape solder clips, etc...		1.50
28-hours labor	1.125	31.50

Cost on job.....	\$193.37
Plus 15% costs.....	29.00

Total cost	\$222.37
Contract price given.....	\$306.00
Less	222.37

Profit.....\$ 83.63

.74 hours per outlet

12.6 ft. cable per outlet

Total cost per outlet 2.25

Total outlets 97

This work is being done in this city for a price of \$1.40 to \$1.75 per outlet contract work.

* * *

Bare Neutral Continuity

Editor,

ELECTRICAL CONTRACTING:

I have read with interest the letter in your March issue, from Messrs. A. H. Maier and Edwin F. Koch, electrical inspectors of Evansville, Indiana, concerning the use of a bare neutral conductor in a conduit system.

I would like to ask Inspectors Maier and Koch, what method they use to test the continuity of the bare copper conductor within the conduit system?

George Welman,
Electrical Engineer,
Louisiana Rating and
Fire Prevention Bureau.

New Orleans, La.

* * *

Takes Away His Franchise

Editor,

ELECTRICAL CONTRACTING:

Regarding letter of Louis Stern, of Philadelphia, in your February issue, you do not offer this unfortunate brother of ours any remedy in your editor's note, and I am sorry to say that we are not in a position to offer any solution either as we are up against the same problem. In addition have a number of other more serious problems which sometimes make the business of trying to render efficient electrical service very discouraging.

Our largest problem in electrical contracting is the price cutting that our competitors do in order to

(Continued on page 114)

Contracting News

Information of Interest to Electrical Contractors consisting of items of news, short articles, practical ideas, etc. Our readers are invited to contribute to this department.

Oregon Electragists Contemplate Field Man

The Oregon Electragists will have a part-time field man to assist members with their selling and accounting problems and to build membership if the suggested plan to finance him, adopted at the two-day meeting held on February 11 and 12 at Corvallis, can be consummated. The plan proposes seeking financial support from the other branches of the industry through associate memberships.

The open sessions of the meeting were held jointly with the Oregon Retail Merchants Association. Closed sessions were for contractor-dealers only.

The next meeting of the Oregon Electragists is scheduled to be held at Eugene, on June 10 and 11.

* * *

Red Seals for Old Houses

The Electric Service League of Toronto, Canada, reports that a number of old houses are now being wired to the Red Seal standard and that the movement is growing.

* * *

Law Stops Trouble from Lathers

A bill has just been passed by the Tennessee legislature to prevent building contractors in Hamilton County from starting lathers before the electrical work has been inspected. A copy of the bill furnished by W. A. Orrell, county electrical inspector, Chattanooga, contains the following paragraph:

"That no person, firm or corporation doing or having done any electrical work shall cover or conceal the same by any means such as lathing, plastering, plaster boards, or otherwise, until and after the electrical inspector has inspected and approved such work. Building and electrical contractors shall notify the electrical inspector immediately upon completion of work to avoid any undue delay in construction of buildings."

Price Trend Upward

Although a number of prices in the Resale Price Service this month are lower, the general trend appears to be upward. Much of the rise, of course, is due to the increasing copper prices. In fact, during the next month or two, readers will do well to check all wire prices against suppliers' quotations. With a rapidly rising market as now exists in copper, it is impossible to keep abreast of it in a monthly price service.

Electrical Equipment Output Higher

Preliminary figures on the output of electrical machinery, apparatus and supplies in 1927, are reported by the Census Bureau to have reached a total value of \$1,637,307,035, an increase of 6.3 per cent over 1925. The figures show the great increase in industrial application of electricity. In spite of lower prices, the output of motors increased from \$113,000,000 to \$122,000,000. The lower figures for conduit and wiring devices is accounted for by lower prices.

California Considering Credit Plan

One of the most important topics discussed at the Sacramento meeting of the California Electragists, Northern Division, held on February 16th, was the establishment of a sounder credit situation in a manner similar to the Detroit Credit Plan. This association and the local jobbers have been cooperating for some time to improve the financial position of the contractor by promoting the use of the Electragist Standard Accounting System. The electragists, however, feel that the key to the situation lies in improved credits and are, therefore, studying the Detroit Plan with the hopes of being able to find a solution soon.

It was announced at the meeting that a second field man was to be appointed and that Earl Browne was to be the executive head of state field activities.

The establishment of a uniform ordinance in all cities now without ordinances was urged.

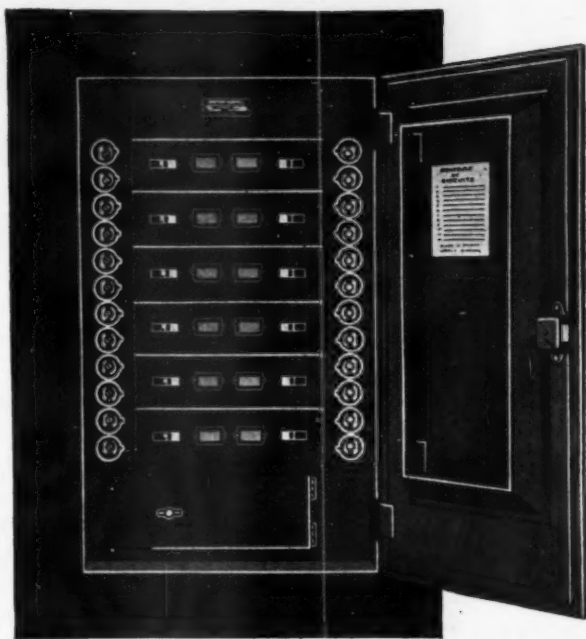
The meeting was also made the occasion for tendering a farewell to C. J. Geisburgh who resigned as

PRODUCTION OF ELECTRICAL PRODUCTS IN 1927 AND 1925

CLASS	1927	1925
Batteries, battery parts, and supplies	\$150,216,485	\$155,247,811
Control apparatus	33,869,615	31,302,841
Electric fans	10,755,001	10,895,769
Generators, motor-generator sets, and automotive starter-motors	115,179,671	110,185,015
Household, heating, and cooking appliances	72,933,274	75,102,165
Industrial apparatus and appliances, not including motor-driven tools and devices	12,343,673	10,283,335
Interior conduits and fittings	42,105,294	46,329,735
Lamps (bulbs only), incandescent	87,933,204	73,558,210
Measuring instruments, relays, and instrument transformers	34,009,999	31,650,355
Motors (not including automotive starter-motors), motor parts, and supplies	122,146,337	113,109,577
Radio apparatus and tubes	191,228,647	178,834,697
Switchboards, circuit breakers, and switches	70,801,619	69,759,067
Telephone and telegraph apparatus	119,271,904	84,432,662
Transformers, induction voltage regulators, and current-limiting reactors	66,611,334	62,153,155
Wiring devices	32,216,698	34,806,452
Miscellaneous electrical machinery, apparatus, and supplies	390,193,383	347,819,162

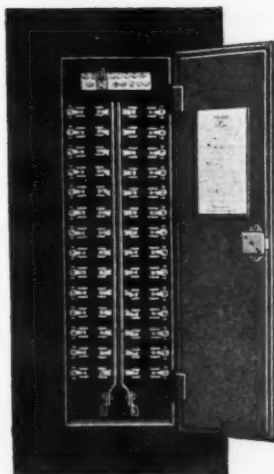
BENJAMIN-STARRETT

Panelboards and Steel Cabinets for Light and Power



Heavy Duty Panelboards offer a choice of three distinct types of cabinets: Safety Front, double door construction, with small door giving access to switches only. Protective Front, single door with protective shield. Open Front, single door without shield. For all classes of installations from residences to large office buildings.

Type G Panelboards are for apartment buildings, factories, churches and similar places having from 4 to 20 branch circuits.



A complete line which provides a suitable panelboard and cabinet for every kind of lighting and power wiring job—for the residence, store, loft building, school, hotel, hospital, factory or modern office building.

Sectional unit construction assures uniform quality of the highest grade, flexibility, adaptability, low installation cost and minimum expense for maintenance over long periods of service.

Harmonious design, combined with careful engineering and skillful manufacturing give Benjamin-Starrett Panelboards and Cabinets an unusually distinctive appearance—the visible evidence on the part of the contractor, of a neat and workmanlike job.

Little Sentry Panelboards are for residences, apartment buildings, stores, schools and similar places having from 4 to 12 branch circuits.



Quick Delivery

Cabinet boxes for the Safety, Protective and Open Front panelboards may be secured from local distributors or district office stocks and installed while panelboard is being shipped from the factory warehouse. Type G and Little Sentry Panels are carried in local stocks completely assembled for immediate shipment.

FREE This 80-Page Catalog The complete listings with their practical arrangement and the clear and detailed illustrations make it easy to select the right panelboard for any job in any type of building. Send for it today.

Benjamin Electric Mfg. Co.

General Offices and Factory

DES PLAINES, ILL. (Chicago Suburb)

New York

Chicago

San Francisco



state manager to become eastern Sales Manager for Electrical West. The Electragists showed their appreciation of "Cy's" work in a number of tangible ways. In saying good-bye, he left one thought—"strive for financial independence in your business as well as in your association."

* * *

Indiana Passes Enabling Act

Although declared by the attorney-general to be unconstitutional, Governor Leslie of Indiana, is reported to have signed a bill enabling cities to adopt ordinances licensing plumbing, building and electrical contractors.

* * *

The Cost of Wiring

A study of the cost of the different items of residential building construction in Cincinnati, Ohio, Decatur, Ill., and Washington, D. C., recently made by the Bu-



The first prize of \$300 offered by the S. E. D. in the National Christmas outdoor lighting contest went to A. J. Bradt of Scotia, N. Y., (upper) and second prize of \$200 to C. L. Bray, Salt Lake City, Utah, (lower).

National Winners Christmas Lighting Contest



reau of Labor Statistics of the United States Department of Labor, show an average for the three cities of 2.8 per cent for electrical wiring and fixtures. Roofing, papering, tile work, and excavating and grading were the

only items bearing a smaller percentage of the cost of residential building than electrical wiring and fixtures. The figures are shown in the accompanying table.

* * *

Storm Heads Louisville Exchange

Sam Storm of the Marine Electric Co., presided over his first meeting as president of the Electrical Contractors Exchange of Louisville, Ky., on March 7.

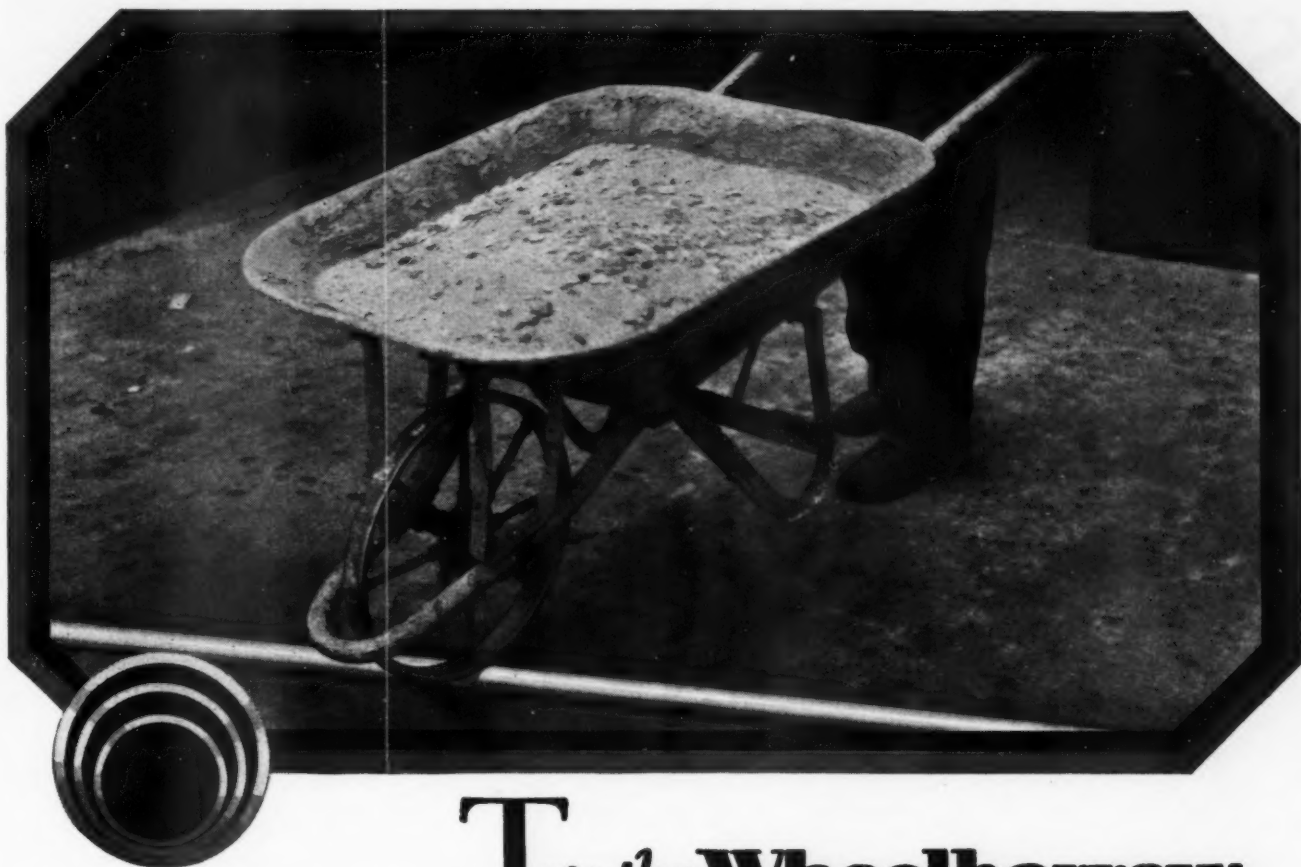
The most important discussion at the meeting related to the formation of state chapters of the Association of Electragists. There is a growing belief on the part of the Louisville contractors that the

Percentage Costs of Different Items in Residential Construction

	Cincinnati, Ohio	Decatur, Ill.	Washington, D.C.	Total
Excavating and grading.....	2.3	2.0	1.9	2.0
Brick work	12.7	11.8	18.4	16.1
Carpenter work	31.4	45.0	33.0	32.7
Tile	2.8	1.0	1.6	2.1
Concrete work	11.3	7.1	8.4	9.5
Electrical wiring and fixture...	3.6	2.5	2.3	2.8
Heating	5.6	6.4	5.3	5.5
Plumbing	11.0	7.8	8.3	9.3
Plastering and lathing.....	9.0	5.9	8.4	8.6
Painting	2.8	5.5	5.4	4.4
Papering .....	.8	.7	1.0	.9
Roofing	1.6	4.2	2.5	2.2
Other items (miscellaneous)...	5.1	.1	3.5	4.0



WIRES POWER COMPANY BUILDINGS:—D. D. Sturgeon, head of Sturgeon Electric Co., Denver, Colo., selected the famous Civic Center as a background for his fleet of cars and some of his men. Mr. Sturgeon is seen in the left foreground, in front of the coupe. He is now hard at work wiring the Public Service Co.'s big warehouse and garage.



STEELTUBES [E.M.T.]* has the same inside diameter as heavy conduit. Made in three sizes, [$\frac{1}{2}$ ", $\frac{3}{4}$ " and 1"] with diameters and wall-thickness shown above. One coupling furnished with each ten-foot length.

10

STEELTUBES Advantages

- 1—Saves thread-cutting
- 2—Bends easily
- 3—Light—handles easily
- 4—Takes any fitting
- 5—Speeds up the job
- 6—Resists corrosion
- 7—Costs less
- 8—Standard price
- 9—Carries Underwriters' Label
- 10—Local stocks always available.

Try the Wheelbarrow Test on your next job!

SOMETIMES a contractor asks, "What happens to STEELTUBES [E.M.T.]* when a heavy-loaded wheelbarrow hits it?"

We usually answer by showing a section that has been pounded again and again by a steel wheelbarrow. And we suggest that he try this practical test himself.

Why not try it on *your* next job? Even after punishment that ought to flatten it out, you'll find that STEELTUBES keeps a round, smooth inner surface—an easy runway for wires. STEELTUBES is strong rigid conduit.

Our sample package will give you an idea of STEELTUBES strength. It includes sections of each size. Ask for it.

Electrical Division
STEEL AND TUBES, INC.
Cleveland, Ohio

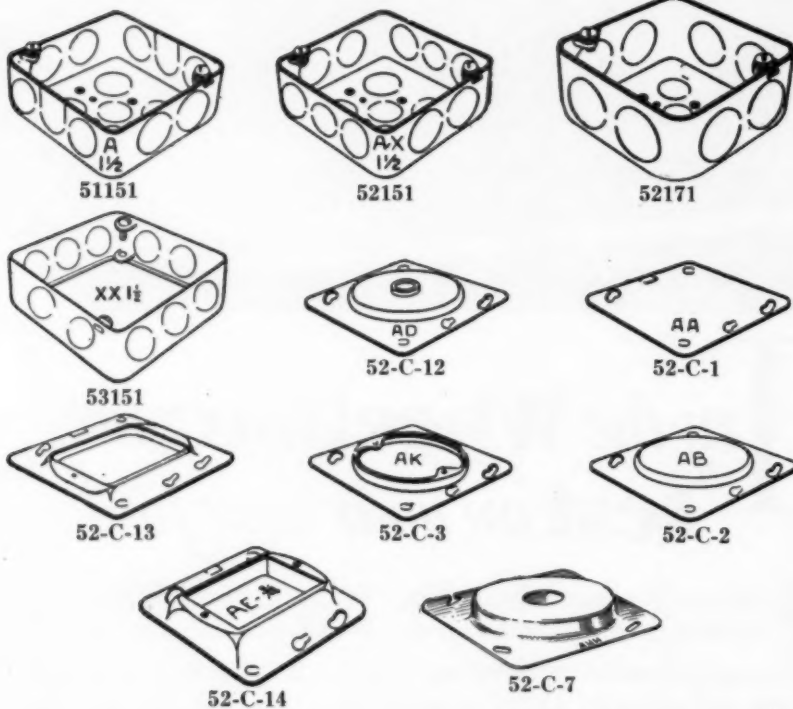
(A subsidiary of Republic Iron & Steel Co.)

★ STEELTUBES Electrical Metallic Tubing is threadless, strong, light and easy to handle. Costs less to buy. Saves time and money on the job.

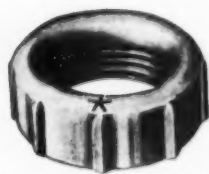
STEELTUBES

STEEL CITY

Can Supply You With Anything Boxes and Covers



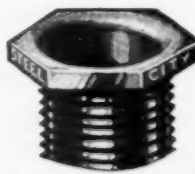
BUSHINGS and NIPPLES



1/2 in. "Star" Bushing. The rounded surface prevents abrasion of wires.



1/2 in. brass bushing 3/8" to 1" design.



Chase Nipple, for use with couplings to connect conduit to boxes. When used in this manner the box may be moved without disturbing the conduit.

LOCKNUTS



STEEL CITY ELECTRIC CO.
PITTSBURGH, PA.



state chapter will furnish a definite solution of the problem of forming a strong organization that will stay put.

The exchange voted to endorse the chapter idea and a committee was appointed to gather all the facts for presentation to members. Sherman Vogt has spent much time corresponding in order to sound the sentiment throughout the State of Kentucky and will communicate his findings to L. W. Davis, general manager of the A. E. I. Ray Chanaberry, chief electrical inspector, is also selling the plan to contractors at every opportunity. With all this interest, it seems safe to predict that a start will be made in the near future.

* * *

Contractor School Attendance High

The Southern California Electricians have been conducting, for some time, a series of schools for their members. They report a regular attendance of about 65. Classes in electric ventilating started the last week in February.



GENERATING CURRENT FORTY-THREE YEARS AGO—E. W. Carroll, manager of Hill Electric Co., Nashville, Tenn., displays his most treasured relic, a 96-volt, 1-KW, 1000-RPM alternator, made in 1886 and used for arc lighting only. It was obtained from Braid Electric Co., some years ago in a motor trade.

The New

RED SEAL

A. B. C.

Armored Bushed Cable



A.B.C.
Anti-Short

AMERICAN CIRCULAR LOOM COMPANY

90 WEST STREET

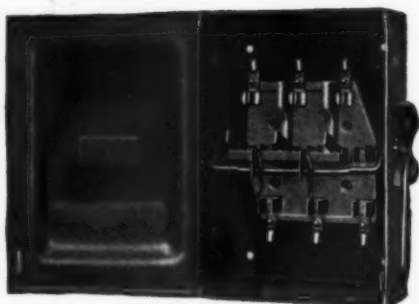
NEW YORK

Quick Make

AND BREAK



... extra years of *Life* in a **T-V Series 4000 Switch**



T-V Series 7000 Entrance Switch

T-V quality in a lighting circuit entrance safety switch. The T-V 7000 has the same general design and construction as series 4000—including molded, crack-proof base. Quick break only but a high quality switch at little cost. Twenty-one sizes from 30 to 100 amps. at 125 and 250 volts—and either solid neutral, 2 or 3 wire.

QUICK make—positive contact under all conditions—this new feature of the Trumbull-Vanderpoel Series 4000 Switch broadens its application. The quality is there for heavy duty—and the quick make gives many advantages.

The strong spring slams the contacts home. A timid or careless operator can't fail to make positive and complete contact. Thus arcing is decreased and slow burning of contacts eliminated—adding years of life.

Type "C" construction—the molded, crack-proof base—the heavy insulation, and rugged, careful construction throughout—a smaller case without reducing convenience of wiring—these are other features which recommend the T-V Series 4000 for every general duty. Made in 6 sizes from 30 to 400 amps. at 250 and 600 volts.

Reliable jobbers can supply you with this and other T-V Switches and our catalog will be sent on request.



**The Trumbull-Vanderpoel
Electric Manufacturing Co.**

Subsidiary of CUTLER-HAMMER, Inc.

Bantam, Conn.



Safety Switches

for Every Service a High Quality Switch.

9435

Suggested RESALE PRICES *for* Wiring Supplies

The prices listed on the following pages are merely suggested resale prices for the commonly used standard supplies and equipment employed in electrical construction work. They are based on average current trade costs throughout the country, very largely obtained from jobbers' price sheets, and are also based on average overhead charges.

* * *

Obviously, prices can be suggested only for the widely used products that are nationally distributed, and under no circumstances is this section intended to function as a directory of products or manufacturers.

* * *

The publishers wish to again emphasize that these are merely *suggested* resale prices and while every effort is made to make them universally applicable and accurate we cannot guarantee them or assume any responsibility for errors.

* * *

The prices appearing in this section will be completely revised each month as trade prices may change.

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A-SUNDRIES

Asbestos Millboard—Per Pound—20c.

House Type

		Edwards		P & W		P & W	
		No. 81 Dixie	No. 91 White Enam.	Ansonia 301 to 309	"Competition"	"Automatic"	"Guaranteed"
No. Drops		\$10.00	\$13.20				
2	Drop	11.75	15.00	\$10.00			
3	"	13.25	16.75	11.00	\$8.40	\$16.60	
4	"	14.75	18.25	12.00	10.75	20.00	
6	"	19.25	23.10	17.00	16.00	25.20	
10	"	23.00	26.50	19.50	23.40	30.00	
12	"	26.50	29.75	22.70	28.25		
14	"			25.25			
16	"			28.00	34.75		
Ex. Drops ea.		2.25	3.00				

(All other Announcers—Sell at List less 10%).

	Bryant	Benjamin	Hubbell	Ea.
	No.	No.	No.	
Medium to Candelabra.....	392	\$ 25
Candelabra to Miniature.....	391	20
Mogul to Medium.....	421	98	50
T. H. to Edison.....	9357	15
Parallel Blades to Medium.....	100	30
Porcelain Blades to Medium.....	KF	524	30
Composition Blades to Medium.....	KL	5897	50

Benjamin No. 91 Socket Extension—Ea.....	\$.40
No. 119 Socket Extension for New Type A Mazda Lamps—Ea.....	.15

Hubbell No. 5828-5829—Ea.....	\$.40
-------------------------------	--------

	Price
Universal Cord Adjuster Standard No. 1417 3/4" Long.....	\$.10
Factory No. 1418 5/4" Long.....	.20
" Reinforced No. 1419 5/4" Long.....	.22
Ball Type No. 1403 & 5 for Type C Cord.....	.08
No. 4634 & 5 for Reinforced Cord.....	.10

Hubbell No. 5919 Acorn Adjustable for Linen Cord.....	\$.10
" No. 6982 " Standard for Pull Sockets.....	.10
" No. 7004 " Candelabra Detachable.....	.10
" No. 7015 or Bryant 750 Luminous Acorn.....	.30

STANDARD SWITCH BOXES

BRACKET SWITCH BOXES

Gem or Similar

			Black	Galvd.
For Loom, Lath Supports-No Clips	2 1/4"	FB	\$.25	\$.30
For Loom, Lath Supports-with Clips	2 1/4"	FCB	.28	.33
For Metallic Cable, Lath Supports with Clamps	2 & 2 1/2	XB & XSB	.34	.39
For Rigid Conduit, Lath Supports No Clamps	2 & 2 1/2	BB & BSB	.30	.35

Gem or Similar

For Loom with Mtg. Ears without Clamps.....	2 1/4"	FT	\$.24	\$.20
For Loom with Mtg. Ears & Clps.....	2 3/4"	FCT	.27	.32
For Metallic Cable, Mtg. Ears & Clamps.....	2 & 2 1/2	XT-XCT-XST	.33	.38
For Rigid Conduit, Mtg. Ears without Clamps.....	2 & 2 1/2	BT-BST	.29	.34

Union or Similar

	Boxes	Spacers
	Black Galvd.	Black Galvd.
For Loom or Rigid Conduit 1½" Deep No. 170.....	\$.24	\$.27
For Rigid Conduit 2¾" Deep—2 Gang No. 160.....	.87	.95
		.37
		.40

Union or Similar

	Single	2 Gang	3 Gang
Solid Drawn for Loom 2½" Deep Type SS Black. . . .	\$.16	\$.31	\$.46
" " " Rigid Conduit No. 180-181-187-Galv. . . .	.26	...	...
" " with Lath Support, 181-BB-GALV. . . .	.26	...	...

	Black			Galvanized		
Loom, Cable, Conduit	2 Gang	3 Gang	4 Gang	2 Gang	3 Gang	4 Gang
Tandem Boxes 1½ & 2" Deep	\$.68	\$1.10	\$1.63	\$.82	\$1.24	\$1.90
" " 2½ & 3" " "	.81	1.23	1.90	.95	1.37	2.18

Union No. DS-1-3 & 5	Appleton 7010-12-14 without Clamps	Black	Galvd.
" No. DS-2-4 & 6	" 7011-13-15 with Clamps...	\$.52	\$.62
		.62	.72

Gem or Appleton—with Receptacle.....	Single \$1.00	Double \$1.40
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Any Make.....	Each \$20
For Concrete Boxes See Page PL-5.	
For Solid Gang Boxes See Page PL-5.	

BOXES & COVERS, OUTLET

Univ. No.	Size	Depth	Bottom	Knockouts	Price Each	Black	Galval
24151	3 1/4" Oct.	1 1/2" KO	1 1/2"	4 1/2"	\$.13	\$.10	
24151	3 1/4" "	1 1/2" KO	1 1/2"	4 1/2"		.16	.15
24155	3 1/4" "	1 1/2" KO	7 1/2"	8 1/2"		.16	.15
51151	4" Sq.	1 1/2"	5 1/2"	8 1/2"		.22	.25
52151	4" "	1 1/2" KO	5 1/2"	10 1/2"		.20	.25
52151	4" "	1 1/2" KO	11 1/2"	10 1/2"		.22	.25
54151	4" Oct.	1 1/2" KO	5 1/2"	4 1/2"		.17	.20
54151	4" "	1 1/2" KO	5 1/2"	5 1/2"		.20	.21
54155	4" "	1 1/2"	9 1/2"	8 1/2"		.26	.30
54171	4" "	2 1/2"	5 1/2"	4 1/2"		.30	.35
72151	4-11/16" Sq.	1 1/2"	5 1/2"	8 1/2"50
72171	4-11/16" "	2 1/2"	5 1/2"	8 1/2"61

COVERS, ROUND
For 3 1/4" & 4" Octagon & Round Boxes

Universal No.	Size	Description	Price Each
			Black Galvd.
24C-1	3 1/4"	Flat Closed Cover Blank 3 1/4"	\$.06 \$.08
24C-2	"	Raised 3/4" Closed Cover Blank	.06 .08
24C-6	"	Flat with 1/4" KO	.07 .09
24C-7	"	Raised with 1/4" KO	.08 .10
24C-12	"	Raised 3/4" Hole, for Cord or Bush	.08 .10
24C-28	"	Spider Flat for Surf. Mntd. Devices	.09 .11
24C-31	"	Raised 3/4" Opng. for Fed. Sign Recep.	.08 .10
24C-33	"	Flat Opng. 3/4" for Spec. Sign Recep.	.23 .25
24C-35 & 36	"	Raised Opng. 3/4" for Scrw Sign Recep.	.08 .10
54C-1	4"	Flat Closed Cover	.07 .09
54C-2	"	Raised 3/4" Closed Center	.08 .10
54C-3	"	Raised 3/4" Opening 2 1/4"	.11 .13
54C-6	"	Flat with 1/4" KO	.08 .10
54C-7	"	Raised 3/4" with 1/4" KO	.10 .12
54C-12	"	Raised with Opening for Cord	.08 .10
54C-28	"	Flat for Surface Mounted Devices	.10 .12
54C-31	"	Raised for Federal Sign Receptacles	.09 .11
54C-35 & 36	"	"	.09 .11
1172	3 1/4"	Porc. Round Cov. for 3 1/4" Box with hole	\$.20
1173	4"	Porc. Round Cov. for 4" Box with hole	\$.30

COVERS, SQUARE
For 4" & 4-11/16" Square Boxes

Universal No.	Size	Description	Price Each
			Black Galvd.
52C-1	4"	Flat Closed	\$.09 \$.11
52C-2	"	Raised Closed Center	.13 .15
52C-3	"	" with 2 1/4" Opening	.15 .17
52C-6	"	Flat with 1/4" KO	.12 .14
52C-7	"	Raised with 1/4" KO	.17 .19
52C-12	"	" Hole for Cord	.14 .16
52C-13	"	Raised 1/4" For Single Flush Devices	.12 .14
52C-14	"	" " " " " "	.13 .15
52C-15	"	" " " " " "	.18 .20
52C-16	"	" 1 1/4" " " " "	.22 .24

For Flush Devices

Universal No.	Size	Description	Price Each
			Black Galvd.
53C-17 & 18	4"	Raised 3/4" For Two Flush	\$.18 \$.20
53C-19	"	Raised 1" For Two Flush	.26 .28
53C-21	"	Raised 1 1/4" For Two Flush	.28 .30
53C-28	"	Flat For Surface Mounted	.18 .20
53C-35 & 36	4" Sq.	Raised For Sign Receptacles	.17 .19
53C-48	"	Raised with 2 1/4" Opening	.12 .14
53C-52	"	Raised 3/4" For Single Flush	.12 .14
72C-1	4-11/16" Sq.	Flat Closed	.30
72C-2	"	Raised Closed Center	.38
72C-3	"	Raised 2 1/4" Opening	.40
72C-12	"	Raised with Hole for Cord	.40
72C-14	"	Raised 3/4" For Single Flush	.44
72C-18	"	Raised 3/4" For Two Flush	.55
72C-48	"	Raised 2 1/4" Opening	.40

EXTENSION RINGS
For Flush Devices

Universal No.	Description	Price Each
		Black Galvd.
55151-57151	3 1/4" Octagon Ring—1 1/4" Deep	\$.26 \$.28
53151-55151	4" Square or Octagon Ring—1 1/4" Deep	.28 .30
55171	4" Octagon Ring—2 1/4" Deep	.48 .54

SHALLOW CEILING BOXES & PLATES

Universal No.	Box or Plate	Size & Description	Price Each
			Black Galvd.
26121-26125	Box	3 1/4 x 3 1/4" Box with KO	\$.14 \$.16
26126	"	4 x 4" Round 1/4" KO	.13 .15
26716	Plate	3 1/4 Flat Plate	.08 .10
36115	Box	3 1/4 x 3 1/4 Round with KO	.14 .16
36116	"	3 1/2 x 3 1/2 Round with KO	.11 .13
56111 1/4" KO	"	4 x 4 Round 1/4" KO or 3/4" KO	.13 .15
56112	"	4 x 4 Round 1/4" KO or 3/4" KO	.09 .12
56115	"	4 x 4 Round 3/4" KO	.14 .16
56116	"	4 x 4 Round 3/4" KO	.11 .13
56121	"	4 x 4 Round 3/4" KO	.17 .19
56122	"	4 x 4 Round 3/4" KO	.13 .16
56125	"	4 x 4 Round 3/4" KO	.32 .37

CONCRETE BOXES WITH COVERS
Galvd. Only

Depth	1 1/4"	2"	2 1/4"	3"	3 1/4"	4"	5"	6"
Complete with Plate & Stud	\$.30	\$.35	\$.40	\$.45	\$.50	\$.55	\$.60	\$.65
less	.25	.30	.35	.40	.45	.50	.55	.60

SOLID GANG BOXES & COVERS

Galvd. Only	2	3	4	5	6	7	8
Gang	\$.80	\$ 1.20	\$ 1.65	\$ 2.10	\$ 4.00	\$ 6.35	\$ 8.50
Box Price	.40	.60	.80	1.00	2.00	3.35	3.70
Cover							

BOXES, OUTLET

ARMORED CABLE BOXES

Austin Series 730-731-733	1/2" Deep	3/4" Deep	1 1/4" Deep
With Clamps & Fixture Studs	\$.20	\$.25	\$.35
Appleton Series No. 528 to 534	1/2" Deep	3/4" Deep	1 1/4" Deep
With Ears, with Fixt. Stud and Clamps	..	\$.25	\$.35
No Ears, With Fixt. Stud and Clamps	.20	..	..
With Ears, No Fixt. Stud, With Clmps.	..	.20	.25

ARMORED CABLE BOXES—Continued

Chicago Fuse "Union" with clamps	Galvd.
No. 1286 Shallow 1 1/2" Deep without Fixt. Stud or Bush Plates	\$.18
No. 1287 X Shallow 1 1/2" Deep without Fixt. Stud, with Bush Plates	.20
No. 1287 XS Shallow 1 1/2" Deep with Fixt. Stud, with Bush Plates	.25
No. 1289 Shallow 1 1/2" Deep without Fixt. Stud, without Bush Plates	.28
No. 1289 X Shallow 1 1/2" Deep without Fixt. Stud, with Bush Plates	.30
No. 1289 XS Shallow 1 1/2" Deep with Fixt. Stud, with Bush Plates	.35
G. E. Cable Boxes any style No. 5200-5201—Each	\$.20
Hope Cable Boxes any style No. 2-4-12-14—Each	\$.20
National Electric Products, with Clamps	
No. 2365-6-7 Shallow 1 1/2" Deep with Fixt. Stud or for 1/2 Gas Pipe	\$.20
No. 2345 Octagon Deep 1 1/2" Deep with Fixt. Stud and Clamps	.35
No. 2355 Round Deep 1 1/2" Deep with Fixt. Stud and Clamps	.30
Thomas & Betts	
No. 553-54-55-56-57 Dead Ground, Electric or Combination	\$.30
No. 565-66-67-68 Cable Box, Electric or Combination	.30

BAR HANGERS FOR OUTLET BOXES
Without Boxes

	Straight 18" Bar	Straight 24" Bar	Shallow Offset	Deep Offset	Old Work Bar	Box Cleat
Price with 1/4 Stud	\$.25	\$.35	\$.32	\$.32	\$.30	..
" " "	.28	.38	.35	.35	.23	..
" No Stud	..	..	..	..	..	\$ .16

BAR SETS
Complete with Boxes

	Black Each
3 1/2" Round without Ears	\$.35
3 1/2" Round with Ears	.40
4" Round without Ears	.30
4" Round with Ears	.35

BUSHINGS & LOCKNUTS

BUSHINGS & LOCKNUTS
For Rigid Conduit

	1/2"	3/4"	1"	1 1/4"
Locknuts—Each	\$.01	\$.01 1/4	\$.02 1/4	\$.05
Bushings—Each	.02	.03	.06	.10
Locknuts—Each	1 1/4" \$.10	2" \$.14	2 1/2" \$.24	3" \$.38
Bushings—Each	.13	.24	.35	.55
			1.00	1.65

PORCELAIN CLAMP BUSHINGS
"Federal" or Equivalent

No.	K. O.	Inside Size	Outside Size	Wire Size	Bushing Each	Extra Ring Each
A-1	1/4"	3/8"	1/2"	No. 10	\$.10	\$.04
A-1 1/2	1/2"	5/8"	3/4"	No. 10	.11	.04
A-2	3/4"	1"	1 1/4"	No. 8	.11	.04
A-3	1"	1 1/4"	1 3/4"	No. 8	.12	.05
A-4	1 1/4"	1 3/4"	2"	No. 00	.16	.07
A-5	1 3/4"	2"	2 1/4"	450 CM	.23	.10
A-6	2"	2 1/4"	2 3/4"	1 Mill. CM	.46	.12
B-1	1/4"	3/8"	1/2"	No. 10	.21	.04
K-1	1/4"	3/8"	1/2"	No. 10	.32	.04
K-2	1/2"	5/8"	3/4"	No. 8	.37	.05

PORCELAIN NO CLAMP BUSHINGS
Multi- With Spring Clip, Not Threaded

Catalog No.	Multi	90A	90B	91	92A	92B
Size of Hole	..	1/2"	3/4"	1"	1 1/4"	1 1/2"
To Fit Hole	..	1/2"	3/4"	1"	1 1/4"	1 1/2"
Price	..	\$.05	\$.05	\$.05	\$.06	\$.06

THREADED BUSHINGS

	1/4"	3/4"
Porcelain without Locknut	\$.05 Each	\$.06 Each
" with "	.06 Each	.07 Each
Black Composition	1/4" \$.01	3/4" \$.06
For Sockets		1/4" \$.02

BOXES, FLOOR

NON-ADJUSTABLE TYPE
Latrobe & Steel City or Similar

Latrobe	Steel City	Price
No. 100	No. 490	Round Non-Adjust. Outfit Less Recept. \$3.45
	No. 490	" " " " " " Less Stem Noz. & Recept. 2.40
No. 110	No. 477	" " " " " " with Standard Recept. 3.90
	No. 491	" " " " " " " 20 Amp. Polar. Recept. 4.95
No. 300	No. 499	" " " " " " Midget Res. Outfit with Recept. 2.40
	No. 495	" " " " " " Square Type without Receptacle 4.30
	No. 496	" " " " " " with 15 Amp. Receptacles 5.35
	No. 497	" " " " " " " 25 " " 8.60

ADJUSTABLE TYPE

No. 120	No. 400	Price
	No. 401	Round Cover Outfit without Receptacle \$4.30
No. 130	No. 401	" " " " " " with Receptacle 5.35
	No. 420	" " " " " " Large Type without Receptacle 4.90
	No. 421	" " " " " " with Receptacle 5.95

COVER SNAPS ON

No Cover Screws
to Bother with
on the *New*

H&H SURFACE TUMBLER SWITCH *with Improved Cover Design*

This is the easiest "snap" you've ever had in installing a Snap Switch or Surface Tumbler. Clap the cover over the handle—onto the base—and it's on to stay. These six points cover the story of the snap-on cover:

And don't forget what's *under* the cover of an H&H Surface Tumbler Switch. Unless a switch has the "works," you can't cover it up—long. Not with a snap-on cover or any other! Six points, here, about H&H Tumblers:

- (1) SPEEDS-UP WIRING
- (2) ONE-HAND OPERATION
- (3) SAVES FUSSING WITH SMALL SCREWDRIVER
- (4) FITS ON ACCURATELY
- (5) ALWAYS HOLDS TIGHT
- (6) NEATER-LOOKING JOB

***** "H&H" Surface Tumbler Switches—Schedule "S" Pony Type, 5 Amp., 125 Volts; 3 Amp., 250 Volts					
List No.	List Price	Std. Pkg.	Description	Package Wt. Lbs.	Carton
610	\$0.28	100	Single Pole Solid base	27	10
611	.28	100	Single Pole Slotted base	26	10
612	.48	100	Three-Way Solid base	27	10
613	.48	100	Three-Way Slotted base	26	10
***** These switches have Polished Nicke' covers and Indicating Handles. Supporting Screws spaced 1 1/4" on centers. Height 1 1/2". Diameter of base 2 1/2". *****					

- (1) BALANCED MECHANISM
- (2) SMOOTHEST ACTION
- (3) MOST POSITIVE IN ELECTRICAL CONTACT
- (4) MINIMUM OF "JAR"
- (5) MAXIMUM OF LIFE
- (6) CUSTOMER-PREFERRED

Ask for Catalog "T" for complete description of H&H Switches of *all* descriptions. Your switch is the "works" of your wiring job. So see that it works for your *business lifetime!*

HART & HEGEMAN DIVISION
THE ARROW-HART & HEGEMAN ELECTRIC CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

*Wire
for
Safety*

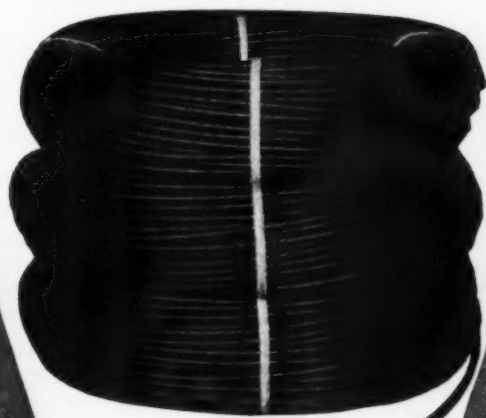


The Grand Ballroom of the Palmer House, Chicago. The entire building is wired with American Steel & Wire Company Electrical Wires.

Americore RUBBER COVERED WIRE

WHEN you purchase Americore Rubber Covered Wire you are assured of a quality wire that is backed by the reputation of the American Steel & Wire Company, and made in accordance with specifications of the National Electrical Code Standard. It is a high-grade rubber covered wire, meeting all National Code requirements and can be recommended for all service conditions in which the working pressure is 7,000 volts or under.

For safety, use Americore Rubber Covered Wire. Made in all sizes. Our sales offices are ready to serve you. Call on the one nearest you.



Americore RUBBER COVERED WIRE FOR INTERIOR WIRING

We also make high grade 30% wire and insulate wire to any specification covering particular requirements.

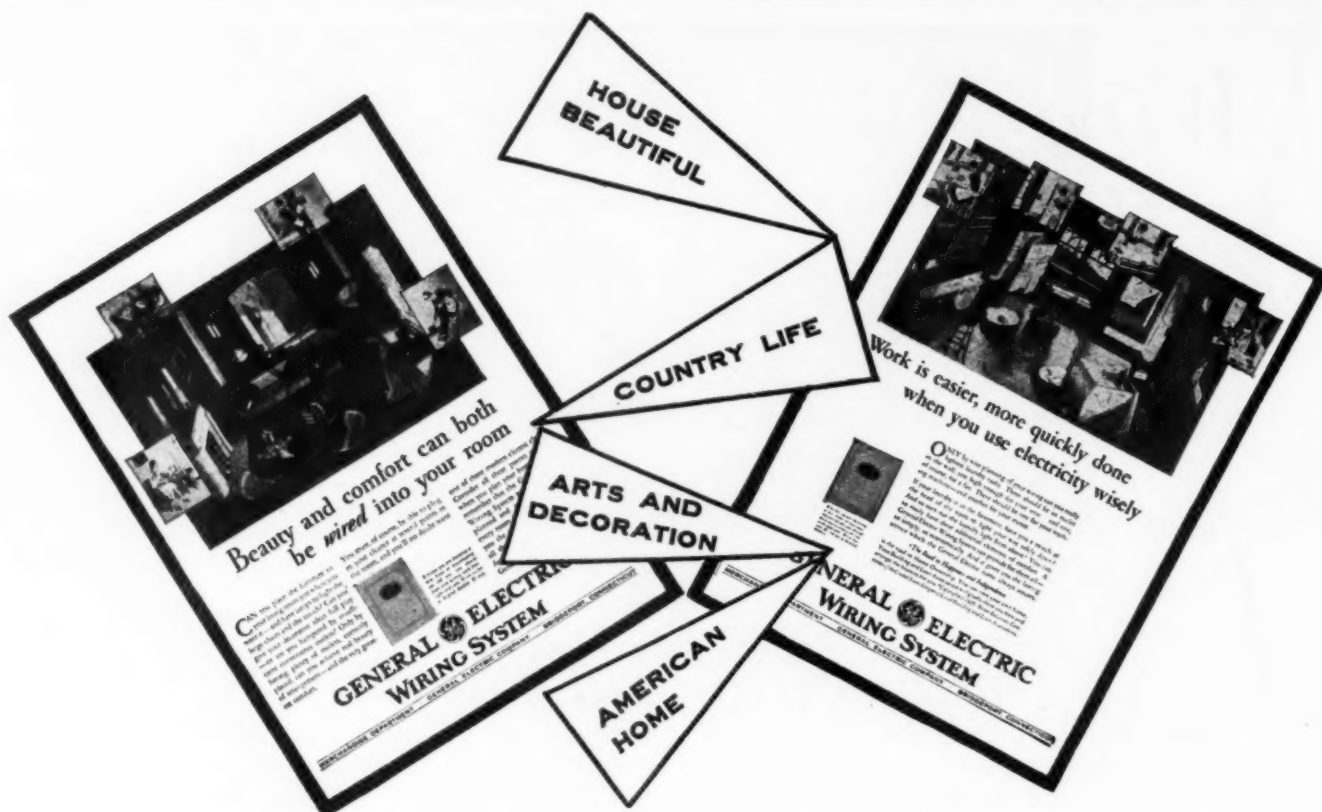
American Steel & Wire Company

Subsidiary of United States Steel Corporation

208 S. La Salle Street, Chicago

30 Church Street, New York

Other Sales Offices: Boston Cleveland Worcester Philadelphia Pittsburgh Buffalo Detroit Cincinnati Baltimore
Wilkes-Barre St. Louis Kansas City Minneapolis-St. Paul Oklahoma City Birmingham Atlanta Memphis Dallas Denver Salt Lake City
U. S. Steel Products Company: San Francisco, Los Angeles, Portland, Seattle Export Distributors: United States Steel Products Co., 30 Church St., New York



ELECTRICAL Contractors wrote *this* advertisement

From everywhere these letters pour in—right out of the daily grind of business. They prove that General Electric advertising, reaching millions, helps make the General Electric Wiring System easy to sell . . . and at a profit:—

"I am continuing to take advantage of the General Electric national advertising. I have installed 360 General Electric Wiring System jobs. Not only is the average price higher . . . so is the profit."

Pirtle Electric Co., Louisville, Ky.

"The customer is always willing to pay a little more for the General Electric Wiring System he has seen advertised in the big magazines week after week."

Rex Electric Co., Shreveport, La.

"Your advertisements get the story of the General Electric Wiring System over, to the

benefit of the electrical contractor . . . Customers, having seen G-E advertising, specify additional outlets."

Scannell Electrical Construction Co., Toledo, O.

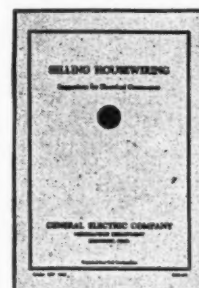
"We attribute this growth (in wiring business) to the G-E national advertising campaign."

Dueweke-Hechinger Electric Co., Detroit, Mich.

"Your national advertising campaign has been of considerable benefit to us."

*Ernst Brothers Electric Shop,
Ann Arbor, Mich.*

You, too, can profit by General Electric national advertising. Drop a card for the booklet "Selling Housewiring," to Section W-224, Merchandise Dept., General Electric Company, Bridgeport, Conn.



GENERAL ELECTRIC WIRING SYSTEM



MONUMENTAL

buildings, built to stand indefinitely. • A-A is widely used today. • A-A provides that margin of safety which builds, or maintains, the hard won reputations of good contractors. Approved and specified by leading architects and engineers.

A-A WIRE COMPANY

BRANCH OF GENERAL CABLE CORPORATION

Offices

BOSTON , PHILADELPHIA , NEW YORK , DETROIT
SAN FRANCISCO , CHICAGO , ST. LOUIS , CINCINNATI

Boxes, Floor

Bell Push Buttons, Etc.

ADJUSTABLE GANG TYPE

ADJUSTABLE GANG TYPE			Price
No. 251	No. 441	Single Adj. Box without Receptacle.....	\$ 5.35
		" " " " with one Receptacle.....	6.45
No. 252	No. 442	Two Gang Box without Receptacle.....	10.70
		" " " " with two Receptacles.....	12.85
No. 253	No. 443	Three Gang Box without Receptacle.....	16.00
		" " " " with three Receptacles.....	19.30
No. 254	No. 444	Four Gang Box without Receptacle.....	21.45
		" " " " with four Receptacles.....	25.70
Add or Deduct for more or less receptacles—each.			\$1.00

FLOOR BOXES
Thomas & Betts

No. 100	Floor Box	Complete	as described in catalog	\$4.30
No. 200	"	"	" " " "	4.30
No. 1100	"	"	Watertight type as described in catalog	8.25
No. 1200	"	"	Telephone	3.75

BOXES, CUTOUT

TYPE "A" SURFACE CUTOUT BOXES

Black					
Width Inches	Length Inches	3" Deep	4" Deep	5" Deep	6" Deep
4½	5	\$.50	\$.55	.....	.....
4½	9	.60	.85	\$1.12	.....
4½	9	3½" .60	.....	.....	.....
6	6	.55	.65	.90	\$1.53
6	8	.65	.75	1.35	1.30
6	9	.70	.75	1.50	1.20
6	10	.75	.90	1.50	1.97
6	12	.80	.90	1.72	2.18
6	16	1.47	1.25	1.92	2.45
8	8	.75	.90	1.25	1.50
8	10	.95	1.00	1.45	2.10
8	12	1.00	1.10	1.65	1.85
8	15	1.15	1.25	2.18	2.70
8	18	1.35	1.65	2.48	2.95
9	9	.85	.95	1.70	2.09
9	12	.95	1.25	2.00	2.45
9	15	1.15	1.35	2.38	2.86
9	16	1.85	1.50	2.45	3.00
9	18	2.00	2.40	2.67	3.25
9	20	2.10	2.50	2.75	3.48
10	10	1.00	1.15	1.65	2.00
10	12	1.15	1.40	1.90	2.10
10	15	1.35	1.55	2.15	2.50
10	18	2.19	2.30	2.45	3.50
10	20	2.59	2.75	3.00	3.82
10	24	3.05	3.40	3.89	4.34
10	28	4.90	5.38	5.61	6.62
10	32	5.41	6.02	6.61	7.35
10	36	6.02	6.65	7.22	8.17
12	12	1.10	1.40	2.15	2.40
12	16	2.50	1.60	3.24	3.65
12	18	2.72	2.75	2.80	3.10
12	20	2.92	3.25	3.50	3.90
12	24	3.48	3.50	3.70	4.25
15	24	4.10	4.25	4.50	4.95
16	15	2.90	3.00	3.75	2.85
16	18	3.40	3.50	3.60	4.00
16	20	3.70	3.85	4.40	4.75
16	28	6.88	7.54	8.15	8.85
18	18	3.80	2.80	3.00	3.30
18	20	4.10	4.75	5.00	5.50
18	24	6.62	7.30	7.80	8.50
18	28	7.58	8.27	8.85	9.60
18	36	9.50	10.15	10.90	11.70
24	24	8.45	7.50	9.90	9.65
24	28	9.65	10.40	11.00	11.85
24	32	10.85	11.65	12.40	13.20
24	36	12.10	12.90	13.70	14.50
24	40	13.25	14.10	15.00	15.60

For Galvanized Boxes Add 20% to above prices.

BELLS & BUZZERS

Ansonia

Name	No.	Description	2½" Bell or Buzz.	3" Bell	4" Bell	Cow or Sleigh
No. 656	656	Sgle. Coil Non-Adjust.	\$.60			
Antonia	652	Dbble. Coil Round Base	.70	.....	.....	.....
Wizard	659	Dbble. Coil Non-Adjust.	.75			
Eureka	641	Dbble. Coil Adjust. B.	1.00	\$1.20	\$1.60	\$1.70
Acme	631	Dbble. Coil Adjust. A.	1.35	1.50	1.85	2.25
Eureka	621	Dbble. Coil Wood Bx. B	1.60	1.75	2.00	2.25
Wizard	660	Comb. Bell & Buzzer	1.20	1.30		
"	666	Watch Case Buzzer...	1.25	.....	.....	.....
"	655	N. P. Square Buzzer...	2.00	.....	.....	.....
Monitor	658	Monitor Round Bell..	.....	1.80		
"	661	" " " " " "	.....	1.80	.....	.....

Edwards

Name	No.	Size	Description	Price Each
Diegie	720	2 3/4"	Two Coil Non-Adjustable Bell.....	\$.75
	725	"	" " " " Buzz.....	.75
Nubel	735	2 3/4"	" " " " Gray Enameled Bell.....	.60
	736	"	" " " " Buzz.....	.60
Combel	737	2 3/4"	" " " " Bell & Buzz.....	1.15
Tubell	738	"	" " " " " Two Bells.....	1.25
Cadet	710	2 3/4"	Two Adjustable Bell.....	1.00
	715	"	" " " " Buzz.....	1.00
"	712	3"	" " " " Bell.....	1.20
"	714	4"	" " " " ".....	1.60
"	X	"	" Cow or Sleigh ".....	1.70
Buz-A-Bell	730	2 1/4"	Combination Bell & Buzz.....	1.20
Monitor	156	3"	Nickel Bell Nickled Gong.....	1.80
Bronx	750	1 3/4"	Monkied Watch Case Buzz.....	1.25

Edwards—Lungen

Size	Price
1 1/2"	\$3.00
1 3/4"	1.80
2 1/4"	1.60
2 3/4"	2.00
3"	2.20
6"	9.50
Cow or Sleigh	2.25

No. 15 Buzzers

Size	No.	Price
1 1/2" x 1 1/2"	No. 0.....	\$1.85
2 1/2" x 1 1/2"	No. 1.....	1.60
2 1/2" x 1 3/4"	No. 2.....	1.70
3" x 2"	No. 3.....	2.00
3 1/2" x 2 1/2"	No. 4.....	2.20

Partrick & Wilkins Iron Box Bells

Small 2 1/2" Iron Box Bell Adjustable Dble. Coil.....	Price \$.75
Fancy Gong Cow or Sleigh Bell Adjustable Dble. Coil.....	1.75
Small 1 1/2" Nickled Midget Bell.....	2.00
6" Large Iron Box Bell—5 Ohms.....	7.50
8" " " "—5 Ohms.....	12.00

Partrick & Wilkins Buzzers

Standard 2 1/2" Iron Box Buzzer Adjust. Dble. Coil.....	Price \$.75
Nickeled Watch Case Buzzer.....	1.05
" Midget Buzzer—1 1/2" x 1 1/8".....	1.90
Flush Buzzer—2 1/2" x 4 1/2".....	3.30
Oak Wood Box Buzzer—3" x 4 1/2".....	1.00

Partrick & Wilkins Wood Box Bells

	2½"	3"	4"	5"	6"
Regular Gong.....	\$2.00	\$2.10	\$2.40	.....	6.40
Dinner ".....	.....	6.00	8.25	\$11.20	13.20
Cow ".....	.....	6.30	9.60	13.65	15.60

Stanley & Patterson

Name	No.	Description	2½ Bell or Buzz	3" Bell	4" Bell	Cow or Sigh.
Eclipse	200-1-2	Non-Adjust. Class C.....	\$.75	\$.85		
PRXXX	210 to 18	Adjustable Class B.....	1.00	\$1.20	\$1.60	\$1.70
Marlo	220 to 28	Adjustable Class A.....	1.35	1.50	1.85	2.25
"	231 to 60	Transformer Type.....	6.15	6.35	6.85	8.60
Eclipse	238	Combina. Bell & Buzzer....	1.25			
Monitor	238	Monitor Bell N. P.....		1.80		
P R	240-261	Watch Case Buzz. Adjust....	1.25			
P R	265-266	" " Non-Adj.....	1.00			

Schwarze Small Iron Box Type

No. 31 & 32	2½" Bell	Buzzer	3" Bell	4" Bell
Price Each.....	\$.65	\$.60	\$1.00	\$1.45

SKELETON BELLS

Any Make

	2½"	3"	4"	5"	6"	8"	10"	12"
Class A....	\$5.75	\$6.00	\$7.25	\$9.40	\$10.60	\$16.00	\$25.00	\$31.50
" B....	.....	5.60	6.65	7.85	8.95	14.45	21.40	27.60

BELL PUSH BUTTONS, TREADS, ETC.

PUSH BUTTONS, ETC.
Ansonia

Round Stamped		Price
D-33	1 1/4" Diameter.	\$.80
506	1 1/4" Diameter Fixed Back.	.25
507	With Card Holder.	.40
513	1 1/4" Diam. Loose Back.	.75
514	" " " "	.35
515	" " " "	.45
517	2 1/4" " Fixed Back.	.30
579	1 1/2" " 562 Center.	.80

Round Cast	2 3/4" Diam.	Price
508 & 510	1 1/2" Loose Back	\$1.25
511	2 1/2" " " "	.75
512	2 1/2" " " "	1.25
540	2 1/2" " " "	.70
550	2 1/2" " " "	.95
570	2 1/2" " " "	.85

Other Ansonia Push Buttons, Etc.

D-33	Desk Push.....	\$.50
F-33	Stamped Flush Push.....	.80
G-33	" Diamond Push.....	.80
505	Wood Pear Push.....	.65
521-524	Stamped Push.....	.85
528 to 524	" " " ".....	1.05
535-536	" " " ".....	1.25
538	" Oblong Push.....	1.60
541	Oblong for Card.....	2.10
543	" 2 Post.....	1.60
544	" For Card.....	1.50
545	2 Gang Oblong for Cards.....	2.30
545	3 " " " ".....	3.35
545	4 " " " ".....	4.60
546	Oblong 2 Gang.....	2.10
547	" 2 " " ".....	1.90
548	" Sgle. Gang.....	.85
549	" " " ".....	1.50
562	Desk Push.....	.45
577	Diamond Push.....	.80
578	" " " ".....	.85
	Wood Push Button.....	.20

PL-8

B-Sundries

WIREHOLDERS WITH INSULATORS National Elec. Products

No.	Light Type	Length	Each	No.	Heavy Type	Length	Each
105-1X	1	6"	.30	105-1	1	6"	.60
105-1	1	6"	.30	105-10	1	6"	.65
105-10	1	4 1/2"	.30	105-25	2	10 1/2"	1.30
105-25	2	10 1/2"	.55	105-26	2	11 1/2"	1.35
105-26	2	13 1/2"	.60	105-29	2	14 1/2"	1.35
105-29	2	13 1/2"	.60	105-34	3	17 1/2"	1.90
105-34	3	13 1/2"	.85	105-36	3	17 1/2"	1.05
105-36	3	16 1/2"	.90	105	Insulator Only		.10
105	Insulator Only		.18	106	Insulator Only		.10

B-SUNDRIES, BOLTS, ETC.

CARRIAGE BOLTS Galvanized

	Length	3"	3 1/2"	4"	5"	5 1/2"	6"
1/2" Diam. Each..		\$.05	\$.05	\$.05	\$.06	\$.07	\$.08
3/4" " " " "		.08	.09	.09	.10	.11	.12

MACHINE BOLTS WITHOUT WASHERS Galvanized

Diam.	Length	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"
1/4" Each.....		\$.05	\$.06	\$.07	\$.08	\$.10	\$.12	\$.14	\$.16	\$.20	\$.22	\$.25
3/8" " " " "		.10	.12	.13	.14	.16	.18	.20	.22	.24	.27	.29
1/2" " " " "		.12	.14	.15	.16	.18	.20	.22	.24	.27	.29	.31
3/4" " " " "		.15	.18	.19	.20	.22	.24	.27	.29	.31	.34	.37
1" " " " "		.18	.20	.21	.22	.24	.27	.29	.31	.34	.37	.40
1 1/4" " " " "		.20	.22	.23	.24	.26	.28	.30	.32	.34	.37	.40
1 1/2" " " " "		.22	.24	.25	.26	.28	.30	.32	.34	.37	.40	.43
1 3/4" " " " "		.24	.26	.27	.28	.30	.32	.34	.37	.40	.43	.46
2" " " " "		.26	.28	.29	.30	.32	.34	.37	.40	.43	.46	.49

STOVE BOLTS Round or Flat Head

Length	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"
Up to 1" Long Per Dozen.....	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10
1 1/4" to 1 1/2" " " " "	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
1 1/2" to 2" " " " "	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
2" to 2 1/2" " " " "	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
2 1/2" to 3" " " " "	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
3" to 4" " " " "	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10

TOGGLE BOLTS, STEEL "Paine"

Size—Diameter	2"	3"	3 1/2"	4"	5"	6"
1/2" Long Price Each.....	\$.10	\$.10	\$.10	\$.10	\$.10	\$.10
3/4" " " " " " "	.10	.10	.10	.10	.10	.10
1" " " " " " "	.10	.10	.10	.10	.10	.10
1 1/4" " " " " " "	.10	.10	.10	.10	.10	.10
1 1/2" " " " " " "	.10	.10	.10	.10	.10	.10
2" " " " " " "	.10	.10	.10	.10	.10	.10
2 1/2" " " " " " "	.10	.10	.10	.10	.10	.10
3" " " " " " "	.10	.10	.10	.10	.10	.10
3 1/2" " " " " " "	.10	.10	.10	.10	.10	.10
4" " " " " " "	.10	.10	.10	.10	.10	.10

NOTE: For Brass Toggle Bolts—2 1/2 times above prices.

FIXTURE BLOCKS Round

	4 & 5" Round	6 & 7" Round
1/4" or 3/8" Plain.....	\$.25	\$.30
1/4" or 3/8" Slotted.....	.35	.40
Ceiling Button—P & S Porcelain No. 170—Each.....		\$ 1.12
Switch Bases—See Snap Switches Page PL-19.		

CORDS, FIXTURE, LAMP AND HEATER

SINGLE FIXTURE CORD

Single Lamp Cord	Type	No. 18	No. 16	No. 14	No. 12
Single Cotton Covered Cord—Light	F-64	\$.01	\$.01 1/2	\$.02	\$.03
Single Cotton Covered Cord—Heavy	F-32	.01 1/2	.02	.03	.04
Single Artificial Silk Cord—Heavy..	F-32	.02	.03	.04	

DOUBLE LAMP CORD

Regular Lamp Cord	Type	No. 18	No. 16	No. 14	No. 12
Cotton Covered Twisted Pair.....	C	\$.02 1/2	\$.04	\$.06	\$.10
" " Parallel Pair.....	PO	.03 1/2	.04	.07	
" " Twisted Parallel Pair.....	PD	.04	.05		
Artificial Silk Twisted Pair.....	C	.03 1/2	.05	.08	
" " Parallel Pair.....	PO	.04	.05	.08	

REINFORCED CORD

Not Asbestos	Type	No. 18	No. 16	No. 14	No. 12
Cotton Covered Light Type 1/4"	PS	\$.04	\$.05	\$.07	
" " Heavy 1/4"	P	.05	.06	.08	\$.12
Weatherproof Light Type 1/4"	PSWP	.03 1/2	.05		
Heavy Type 1/4"	PWP	.04 1/2	.05 1/2	.08	

HEAVY DUTY PORTABLE CORD "Duracord" or Similar. Extra Reinforced

Type	PS Light 2 Cond. Port. Cord..	No. 18	No. 16	No. 14	No. 12	No. 10
" P Heavy 2 " " " "		\$.09				
" P Heavy 3 " " " "		.14	\$.17	\$.21	\$.25	\$.31
" P Heavy 4 " " " "			.18	.25	.33	.41

ALL RUBBER CORD

"Tirex" "Royal" "Super" "Indestructo" or Similar

	No. 18	No. 16	No. 14	No. 12	No. 10
SJ Junior 2 Conductor Black.....	\$.08	\$.10			
" " 2 " Green.....	.09	.12			
" " 3 " Black.....	.12	.15			
S Type Heavy 2 Conductor Black..	\$.14	\$.16	\$.23	\$.28	\$.34
" " 3 " " " "	.18	.21	.28	.33	.45
" " 4 " " " "	.20	.23	.34	.41	.57
" " Sgle. Cond. Black...	.08	.09	.10	.11	.13

HEATER CORD

Asbestos Covered	No. 18	No. 17	No. 16	No. 14	No. 12
Stand. Twisted or Wound Asbest. 1/4"	\$.04		\$.06	\$.10	\$.12
American Beauty Heater Cord.....		.09		.11	.20
Rockbestos Heater Cord.....	.06	.07	.08	.10	.20

"Deltabeston" Heater Cord	No. 18	No. 16	No. 14	No. 12
Type A Asbestos Braid overall.....	\$.12		\$.13	\$.14
" C Cotton Braid overall.....	.09		.11	.12
" D " " on ea. cond.....	.10		.12	.13
" E Cotton on ea Cond. & over	.11		.13	.14
both.....				.18

NOTE—For Armored Cords See Page PL-9.
" Extension Cords See Page PL-10.
" Fixture Wire See Pages PL-26 & 27.
" Bell Wire See Page PL-27.

MISCELLANEOUS CORD

Description	Type	No. 18	No. 16	No. 14	No. 12	No. 10
x Brewery Cord.....	CB	\$.04	\$.05	\$.07		
x Canvasite Cord.....	CC	.06	.07	.09		
x Deck Cable.....	PWP	.07	.08	.10		
x Packinghouse Cable.....	PKWP	.07	.08	.10		
x Stage & Theatre Cable..	T	.06	.08	.10	\$.13	\$.16

x Note—These prices are based on less than coil lot trade prices.

CONDUCTING BELL CORD

Spun Silk

Number of Conductors	2	3	4	5	8	10	14	18
Cond. Cond. Cond. Cond. Cond. Cond. Cond. Cond.								
Price Per Foot.....	\$.08	\$.18	\$.20	\$.21	\$.28	\$.38	\$.68	\$.88

Note—For Armored Lamp Cord See Page PL-9.

CONDUIT, ELBOWS, COUPLINGS, BUSHINGS, ETC.

RIGID CONDUIT

	Black Per Foot	Galvd. Per Foot	Cutting & Threading Per Thread	Cutting Only Per Cut
1/2".....	\$.10	\$.11	\$.20	\$.10
3/4".....	.13	.14	.20	.10
1".....	.18	.20	.25	.10
1 1/4".....	.25	.28	.30	.15
1 1/2".....	.31	.34	.35	.15
2".....	.40	.44	.40	.20
2 1/2".....	.63	.70	.50	.25
3".....	.83	.90	.60	.30
3 1/2".....	1.05	1.15	.70	.30
4".....	1.26	1.39	.80	.30

ELBOWS, COUPLINGS, BUSHINGS, LOCKNUTS

Price Each

Size Each	Bends or Elbows Black Galv.	Couplings Black Galv.	Bushings Galv.	Locknut Galv.	Erickson Coupl. Galv.
1/2".....	\$.16	\$.18	\$.10	\$.11	\$.02
3/4".....	.20	.24	.14	.15	.03
1".....	.30	.35	.18	.20	.06
1 1/4".....	.42	.45	.24	.26	.10
1 1/2".....	.55	.60	.31	.34	.13
2".....	.86	1.00	.40	.42	.14
2 1/2".....	1.40	1.60	.58	.62	.24
3".....	3.75	4.25	.75	.82	.38
3 1/2".....	8.10	9.25	1.00	1.08	.50
4".....	9.35	10.65	1.23	1.32	.68

Also on Page PL-10.
Also on Page PL-5.
Also on Page PL-15.

FLEXIBLE METALLIC CONDUIT

"Greenfield", "Flexsteel", or Equivalent

Single Strip Per Foot....	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Double Strip Per Foot....	\$.08	\$.10	\$.12	\$.20	\$.36	\$.40	\$.57	\$.70
For Fittings for Metallic Conduit See Page PL-14.								
For Non-Metallic Conduit or Loom See Page PL-15.								
For Steel Armored Cable & Lead Covered See Page PL-8.								

CABLE, ARMORED & NON-METALLIC SHEATHED

ARMORED CABLE, BX OR SIMILAR

			Price Per Foot		
			No. 14	No. 12	No. 10
SINGLE CONDUCTOR	Solid	Single Strip	\$.09	\$.10	\$.11
	Stranded	Double	.12	.13	.14
TWO CONDUCTOR	Solid	Single	.06	.08	.10
	Stranded	Double	.08	.10	.12
THREE CONDUCTOR	Solid	Single	.09	.11	.13
	Stranded	Double	.12	.14	.16
FOUR CONDUCTOR	Solid	Single	.17	.21	.25
	Stranded	Double	.21	.27	.33
OVALFLEX	2 Conductor	Single	.07	.10	.13
	3 " "	Single	.10	.14	.18

			Price Per Foot		
			No. 8	No. 6	No. 4
SINGLE CONDUCTOR	Solid	Single Strip	\$.10	\$.15	...
	Stranded	Double	.16	.18	.27
TWO CONDUCTOR	Solid	Single	.13	.16	.20
	Stranded	Double	.20	.23	.31
THREE CONDUCTOR	Solid	Single	.28	.33	.40
	Stranded	Double	.35	.40	.47
FOUR CONDUCTOR	Solid	Single	.50	.55	.62
	Stranded	Double	.62	.67	.75
OVALFLEX	2 Conductor	Single	.20	.23	.27
	3 " "	Single	.27	.31	.35

LEAD COVERED ARMORED CABLE

			Price Per Foot		
			No. 14	No. 12	No. 10
Single Conductor Solid Lead Covered			\$.12	\$.15	\$.17
" " Stranded " "			.23	.30	.38
Two " " Solid " "			.30	.38	.48
" " Stranded " "			.38	.48	.60

			Price Per Foot		
			No. 8	No. 6	No. 4
Single Conductor Solid Lead Covered			\$.20	\$.27	\$.33
" " Stranded " "			.59	.82	1.10
Two " " Solid " "			.70	1.22	1.48
" " Stranded " "			1.22	1.48	1.75

ARMORED LAMP CORD

			Per Foot		
			No. 18	No. 16	No. 14
Plain Armored Lamp Cord	Single Strip		\$.12	\$.13	\$.17
Reinforced Lamp Cord	Double Strip		.19	.22	.30

NON-METALLIC SHEATHED CABLE

"Romex", "Loomwire", "Wireflex", or similar

			Price Per Foot		
			No. 14	No. 12	No. 10
2 Wire	Without Ground Wire		\$.05	\$.07	\$.10
2 " "	With " "		.05½	.07½	.10½
3 " "	Without " "		.08	.11	.15
3 " "	With " "		.08½	.11½	.15½
			Price Per Foot		
			No. 8	No. 6	No. 4
2 Wire	Without Ground Wire		\$.15	\$.20	\$.26
2 " "	With " "		.15½	.20½	.27½
3 " "	Without " "		.23	.30	.40
3 " "	With " "		.23½	.30½	.41
			Price Per Foot		
			No. 14	No. 12	No. 10
Straps Each			\$.01	\$.01	\$.01
Clip (Open Wiring) Each			.03	.03	.03
Connectors Threadless Ea.			.07	.07	.07
" Threaded Ea.			.10	.10	.10

CUTOUTS OR FUSE BLOCKS

PLUG CUTOUTS

125 Volts, 30 Amp. Porcelain

			Price		
			Universal	Standard	Covered
Single Pole—Main Line			62569	\$.25	\$.50
Double " "			62965	.35	.65
Triple " "			62165	.50	.85
Double Pole Single Branch			61935	.35	.65
" " Double " "			62587	.55	1.00
" " Cross " "			8020	.40	.75
Triple to D. P. Double Branch			62199	.55	1.10
Triple Pole Single Branch			8042	.65	1.10
" " Double " "			62135	.85	1.75

DEAD FRONT PLUG CUTOUTS

With Covers

			Price		
			4 Circ.	8 Circ.	12 Circ.
Benjamin 30 Amps.			4 Circ.	8 Circ.	12 Circ.
With Flush Cover 59904-8-12-16			\$1.80	\$3.60	\$5.40
With Overhanging Cover 59804-8-12-16			2.00	4.10	6.00

DEAD FRONT PLUG CUTOUTS—Continued

			Price		
			With Short Cover	With Long Cover	
BRYANT					
Double Pole Single Branch No. 71935			\$.95	1.45	\$1.55
" " Double Branch No. 72587 & 82587			1.45	1.85	1.65
Triple to Dble. Pole Dbl. Branch No. 72199 & 82199			1.85	2.25	2.05
GENERAL ELECTRIC					
2 Circuit No. 2436 & 2435 30 Amp. 250 Volt			\$.70	1.20	1.75
4 " " No. 2441 & 2440 " "			.90	1.40	1.95

CARTRIDGE CUTOUTS

			Price		
			0-30 Amp.	31-60 Amp.	61-100 Amp.
Porcelain Base, 250-600 Volts					
Single Pole Main Line Enclosed Porcelain			\$.35	\$.55	\$1.20
Double " " " "			.50	1.20	2.40
Triple " " " "			.65	1.70	3.30
Double Pole Two Wire Single Branch Porcelain			.60	1.45	2.95
" " Double " "			1.10	2.95	5.95
Double Pole Three Wire Double Branch Porcelain			1.25	3.50	7.00
Triple Pole Three Wire Single Branch Porcelain			1.20	2.50	5.00
Triple Pole Three Wire Double Branch Porcelain			1.90	4.95	9.95
Single Pole Main Line			.50	.75	1.65

SLATE BASE

			Price		
			250 Volt	600 Volt	
Single Pole-Slate Base-250 V.			\$.45	\$.70	\$1.50
" " " " 600 V.			.65	1.00	1.90
NOTE—Cartridge Cutouts are sometimes called Enclosed Cutouts.					

C-SUNDRIES

GROUND CLAMPS

			Price		
			1/2" to 1" 3/4"	1" 3/4" to 2" 3/4"	2" 3/4" to 3"
Standard Adjustable Ground Clamps, any make			\$.10	\$.15	\$.20
Blackburn			.24	.28	.40
Other Types					
Chase Shawmut 3661-68			\$.20	\$.25	\$.30
G. V. A Series 5000			.30	.32	.40
G. V. S Series 8000			.10	.15	.16

STRAPS, CLIPS OR CLAMPS

For Pipe, Without Screws

			Price		
			1/2" to 1" 3/4"	1" 3/4" to 2" 3/4"	2" 3/4" to 3"
Tinned Straps, 2 Hole			\$.01	\$.01	\$.01
Light Steel Straps, 1 Hole			.03	.03	.05
Mall. Iron Straps, 1 Hole			.07	.08	.10
D & S Conduit Clamps			.10	.14	.18

COLORING & FROSTING LIQUID

			Price		
			7 ounce Cans	15 ounce Cans	30 ounce Cans
Crescent (McGill)			\$.20	\$.40	\$.60
Cefco			.20	.40	.60
Franco			.20	.40	.60

CLUSTERS

Benjamin, Wireless & Adjustable

			Price		
			Multiple Wireless	Series Wireless	Adjustable Type
No. 12			\$1.75	No. 12½	\$1.75
No. 13			2.05	No. 13½	2.05
No. 14			2.30	No. 14½	2.30
No. 15			2.60	No. 15½	2.60
No. 16			2.90	No. 16½	2.90
No. 22			1.50	No. 22½	1.50
No. 23			1.75	No. 23½	1.75
No. 24			2.05	No. 24½	2.05
No. 33T			2.20	No. 33½	2.20
No. 34T			2.50	No. 34½	2.50
No. 82			1.15	No. 82½	1.15
Clips for Loom					\$.02 Each or 3 for \$.05
Crowfeet 1/4"-1/2" Each					.10

CORD & WIRE CONNECTORS

SMALL FIXTURE & WIRE CONNECTORS

Solderless

			Price		
			Insulated Solderless Wire or Fixture Connectors Similar to "Simplex"	Wirenuts	"Marr"
Wirenuts			\$.10	\$.10	\$.10
Non-Insulated Solderless Wire Connectors—2 Screw—All Metal			.10	.10	.10

SET SCREW CONNECTORS

Round Brass

		No.	No.	No.	No.
		12-14	10	8	6
Divided Wall	Wire Size 2 Screws	\$.10	\$.12	\$.13	\$.14
"	" 4 "		.15	.16	.17
Hole Thru	2 "	.14	.16	.18	.20
"	4 "				.22
		No.	No.	No.	No.
		2	1/0	2/0	3/0
Divided Wall	Wire Size 2 Screws	\$.20	\$.35	\$.42	\$.70
"	" 4 "	.28	.36	.55	.70
Hole Thru	2 "	.30	.38		
"	4 "	.34			

DOSSERT SOLDERLESS CONNECTORS

			Price		
			Up to No. 4	3 to No. 1	No. 0
2 Way S & Elbows			\$.65	\$.75	\$.80
Cable Taps			1.00	1.10	1.20
3 Way S & Y's			1.00	1.10	1.20
Lugs—All Types			.50	.60	.70

PL-10

Cord & Wire Connectors

Fittings, Conduit

CORD & MOTOR CONNECTORS

	No.	Complete		No.	Body Only		No.	Cap Only	
			Price			Price			Price
Arrow									
Midget Comp.	8238		\$.50						
" " Arrolite	8239		.65						
Motor Conn.	RP-8221		.55	8221		\$.50	RP		\$.10
" " "	RL-8221		.65	8221		.50	RL		.20
" " "	RA-8222		.55	8222		.50	RA		.15
" " "	RM-8222		.70	8222		.50	RM		.25
" " "	TM-8222		.70	8222		.50	TM		.25
" " "	RH-8224		.90	8224		.65	RH		.30
" " "	RG-8281		.90	8281		.65	RG		.30
" " "	8330 to 33		.80						
" " "	8334 to 37		.90						
Bryant									
Motor Conn.	KR-130		.60	130		.45	KR		.20
" " "	KG-103		.60	103		.45	KG		.20
" " "	KT-130		.55	130		.45	KT		.10
Hubbell									
Cord Connector	5894		.60	5574		.45	5896		.20
" " "	6116		.55	6118		.45	5964		.15
" " "	6179		.60	6630		.45	6631		.20
" " "	6180		.55	6630		.45	6181		.15
" " "	5518		.60	5574		.45	5420		.20
" " "	7083		1.30	7084		.85	7056		.50
" " "	7090		1.80	7091		1.10	7092		.80
" " "	6408		1.25	6400		.90	6149		.45
Wirt									
Cord Connector			.56			.55			

NOTE: For Attachment Plugs and other caps—See Pages PL-16 & PL-17.

E-SUNDRIES

EXTENSION CORDS—MADE UP

With Attachment Plug & Socket, but Guards-Lamps & Handles Extra

Length in Feet	With Twisted Lamp Cord and Key Socket		With Reinforced Cord and Key Socket		With Artificial Silk Cord and Key Socket	
	No. 18	No. 16	No. 18	No. 16	No. 18	No. 16
4 Foot.....	\$.95	\$1.05	\$1.10	\$1.00	\$1.10	\$1.10
6 ".....	1.00	1.15	1.20	1.10	1.20	1.20
8 ".....	1.05	1.25	1.30	1.20	1.30	1.30
10 ".....	1.10	1.35	1.40	1.30	1.40	1.40
12 ".....	1.15	1.45	1.50	1.40	1.50	1.50
14 ".....	1.20	1.55	1.60	1.50	1.60	1.60
16 ".....	1.25	1.65	1.70	1.60	1.70	1.70
18 ".....	1.30	1.75	1.80	1.70	1.80	1.80
20 ".....	1.35	1.85	1.90	1.80	1.90	1.90
22 ".....	1.40	1.95	2.00	1.90	2.00	2.00
24 ".....	1.45	2.05	2.10	2.00	2.10	2.10
Length in Feet	With All Rubber Cord and Weatherproof Socket					
	Light		Heavy			
	No. 18	No. 16	No. 18	No. 16		
4 Foot.....	\$1.25	\$1.40	\$1.45	\$1.55		
6 ".....	1.45	1.65	1.75	1.85		
8 ".....	1.65	1.90	2.05	2.15		
10 ".....	1.85	2.15	2.35	2.45		
12 ".....	2.05	2.40	2.65	2.75		
14 ".....	2.25	2.65	2.95	3.05		
16 ".....	2.45	2.90	3.25	3.35		
18 ".....	2.65	3.15	3.55	3.65		
20 ".....	2.85	3.40	3.85	3.95		
22 ".....	3.05	3.65	4.15	4.25		
24 ".....	3.25	3.90	4.45	4.55		

ELBOWS & BENDS For Rigid Conduit

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"
Black.....	\$.16	\$.20	\$.30	\$.42	\$.55
Galv.....	.18	.24	.35	.45	.60
Size	2"	2 1/4"	3"	3 1/2"	4"
Black.....	\$.86	\$1.40	\$3.75	\$5.10	\$ 9.35
Galv.....	1.00	1.70	4.25	9.25	10.65

EXPANSION SHIELDS & ANCHORS

Ackerman-Johnson—Dryvin—Star—Diamond—Cinch—Packtite or Similar

Size of Hole	These Prices Do Not Include Screws.		Takes	Screw No.	Price Each
	Length In Inches	Inside Diameter			
1/8"	1/4 to 1 1/4"	1/8"	5-6-7		\$.05
1/4"	1/4 to 1 1/4"	1/4"	5-6-7		.06
3/8"	1/4 to 1 1/4"	3/8"	5-6-7		.08
1/2"	1/2 to 1 1/2"	1/2"	8-9-10-11		.06
5/8"	1/2 to 1 1/2"	5/8"	8-9-10-11		.06
3/4"	1/2 to 1 1/2"	3/4"	8-9-10-11		.08
7/8"	1/2 to 1 1/2"	7/8"	8-9-10-11		.09
1"	1/2 to 1 1/2"	1"	8-9-10-11		.11
1 1/8"	1 1/4 to 2 1/4"	1 1/8"	12-13-14		.06
1 1/4"	1 1/4 to 2 1/4"	1 1/4"	12-13-14		.09
1 1/2"	1 1/4 to 2 1/4"	1 1/2"	12-13-14		.11
1 3/4"	1 1/4 to 2 1/4"	1 3/4"	12-13-14		.13
2"	1 1/4 to 2 1/4"	2"	15 to 18		.08
2 1/4"	1 1/4 to 2 1/4"	2 1/4"	15 to 18		.11
2 1/2"	1 1/4 to 2 1/4"	2 1/2"	15 to 18		.14
2 3/4"	1 1/4 to 2 1/4"	2 3/4"	15 to 18		.11
3"	1 1/4 to 2 1/4"	3"	15 to 18		.20

LAG SCREW ANCHORS (Diamond or Smaller)

Takes Lag Screw	1/4"	3/8"	1/2"	3/4"	1"
Price Without Lag Screw.....	\$.14	\$.17	\$.24	\$.36	1"
Takes Lag Screw.....	\$.42	\$.62	\$.90	1.05	
Price Without Lag Screw.....					

FUSES

PLUG FUSES

Standard Plug Fuses—Any Make—\$.07 each or 5 for \$.25
(Some Manufacturers put these fuses up 4 in a box, in which case they should be retailed at 4 for \$.25.)

ENCLOSED FUSES, NON-RENEWABLE

Amps.	Non-Indicating, Price Each		600 Volts	
	Fuse	Refill	Fuse	Refill
1 to 30.....	\$.10		\$.25	
35 to 60.....	.20		.40	
65 to 100.....	.55	\$.40	1.00	\$.60
110 to 200.....	1.10	.65	1.75	.85
225 to 400.....	2.00	.85	3.65	1.35
450 to 600.....	3.60	1.30	5.30	2.05
650 to 800.....	8.00	2.50	9.75	3.35

Amps.	Indicating, Price Each		600 Volts	
	Fuse	Refill	Fuse	Refill
1 to 30.....	\$.20		\$.40	
35 to 60.....	.30		.60	
65 to 100.....	.85	\$.65	1.65	\$.95
110 to 200.....	1.75	.80	2.65	1.30
225 to 400.....	3.00	1.25	5.55	2.10
450 to 600.....	5.65	2.10	8.05	3.00
650 to 800.....	12.10	4.05	15.00	5.00

RENEWABLE FUSES

Amps.	Fuses		Links	
	250 Volts	600 Volts	250 Volts	600 Volts
1 to 30.....	\$.50	\$ 1.10	\$.03	\$.05
35 to 60.....	1.00	1.25	.05	.06
65 to 100.....	2.00	3.00	.10	.10
110 to 200.....	4.00	5.00	.15	.15
225 to 400.....	7.50	11.00	.30	.30
450 to 600.....	11.00	16.00	.60	.60

FUSE WIRE

Size in Amps.....	1/4	1/2	1	2		
Price Per Pound.....	\$65.00	\$6.50	\$2.60	\$2.30		
Price Per Foot.....	.01	.01	.01	.01		
Size in Amps.....	3	5	6	10	15	
Price Per Pound.....	\$1.95	\$1.50	\$1.50	\$1.30	\$1.30	
Price Per Foot.....	.01	.01 1/2	.02	.02 1/2	.03	
Size in Amps.....	20	25	30	40	50	
Price Per Pound.....	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	
Price Per Foot.....	.04	.05	.07	.08	.10	
Size in Amps.....	60	70	75	80	90	100
Price Per Pound.....	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Price Per Foot.....	.15	.20	.21	.22	.24	.25

Fuse Strip Any Amperage.....\$1.00 per lb.

Fuse Strip Any Amperage....\$1.00 per lb.

OPEN LINK FUSES

Size in Amps.....	Small Wire Type		
	1 to 30	35 to 60	65 to 100
Chicago Fuse Numbers.....	00-0-1-2-3	2-3-5	5
Price Each.....	\$.10	\$.15	\$.20

Large Strip Type

Size in Amps.....	25-100	110-200	225-400
Chicago Fuse Numbers.....	7	7 to 16	10 to 18
Price Each.....	\$.20	\$.30	\$.60
Size in Amps.....	425-600	601-800	801-1000
Chicago Fuse Numbers.....	10 to 18	25 & 28	25 & 30
Price Each.....	\$1.10	\$1.75	\$1.75

STAMPED SHEET METAL LINK FUSES

See Chicago Fuse Catalog

Type of Link.....	B	C	D	E-F-H-I-L-M
C to C Distance.....	1 1/2	2 1/4	2 1/2	See Catalog
Price Each.....	\$.10	\$.10	\$.15	\$.30

FITTINGS, CONDUIT, THREADED

STANDARD TYPES, COVERS EXTRA "Condulets" "Taplets" "Unilets" "V. V."

Type	"Powerlets" Etc.				
	1/2"	3/4"	1"	1 1/4"	1 1/2"
A 1- Piece	\$.33	\$.44	\$.60	\$.87	\$1.12
B " "	.40	.50	.70	1.12	1.47
B 2- " "	.85	1.05	1.55	2.38	3.15
C 1- " "	.50	.57	.85	1.32	1.71
CO " "	.70	.81	1.05	1.75	2.25
D " "	.48	.58	.80	1.32	1.71
E 2 " "	.40	.50	.70	1.12	1.47
(See Page PL-13)					
LB-LF-LR	.63	.81	1.47	2.10	2.80
LBB-LFB-LRB	.81	1.12	1.81	2.75	3.37
LBL-LBR-LUA	.67	.80	1.12	1.71	2.37
T All One Size	.98	1.05	1.40	2.18	3.22
TB-TL-TR	.68	.81	1.12	1.71	2.37
U-UB-UF	.68	.75	1.10	1.76	2.35
X All One Size	.84	1.09	1.47	1.96	2.50
Gaskets	.14	.14	.21	.28	.28
Reducers	.21	.21	.25	.42	.56
Unions	.63	.70	1.05	1.48	2.52

STANDARD TYPES, COVERS EXTRA—Continued

Type	2"	2½"	3"	3½"	4"
A 1-Piece	\$2.32	\$3.46	\$ 6.50	\$10.60	\$11.70
B " "	3.00	5.46	6.50	10.60	11.70
B 2- " "	3.65	5.46	7.30	9.10	18.65
BE " "	5.45	10.60	11.70	19.90	22.10
C 1- " "	3.40	6.24	8.10	11.70	14.30
CO " "	4.46	6.75	10.27	16.38	17.95
D " "	3.40	6.24	8.10	11.70	14.30
E " "	3.00	5.46	6.50	10.60	11.70
F 2- " "	5.46	5.46	7.30	9.10	18.65
LB-LF-LL-LR	For Special Form 6 Fittings See Page PL-13.				
LBB-LFB-LLB-LRB	3.50	6.50	8.45	13.65	15.60
LBL-LBR-LL-LUA	3.72	8.52	9.75	14.30	18.90
T All One Size	3.58	6.50	9.75	14.30	18.90
TA All One Size	5.53	6.50	9.75	14.30	18.90
TB-TL-TR	3.58	6.50	9.75	14.30	18.90
U-UB-UF	4.20	7.80	10.15	16.38	18.75
X All One Size	4.90	7.80	13.00	16.90	20.80

Gaskets	.35	.52	.52	.65	.65
Reducers	.70	1.30	1.76	2.60	3.58
Unions	3.78	6.18	10.40	.....	.....

NOTE: For Special Prices on Types F&L Entrance Fittings See Page PL-13.

COVERS

For Above

	1½"	2"	2½"	3"	3½"	4"
Sheet Steel Blank Met. Cover	\$.11	\$.15	\$.33	\$.45	.....	.....
Cast-Iron	.21	.31	.59	.70	.....	.....
Porcelain with Holes	.14	.22	.35	.51	.....	.....
Metal with 1/4 Nipple	.28	.35	.59	.65	.....	.....
" " " "	.33	.40	.54	.70	.....	.....
" " " "	.35	.42	.56	.73	.....	.....
Porcelain with 1/4 Nipple	.35	.42	.60	.82	.....	.....
" " " "	.42	.49	.67	.88	.....	.....
" " " "	.49	.57	.74	.95	.....	.....
Porcelain for Drop Cord	.49	.56	.70	.....	.....	.....
Porcelain Weatherproof Sockets	.22	.35	.56	.....	.....	.....
Composition with Holes	.28	.42	.70	1.40	.....	.....
Composition Split with Holes	.56	.84	1.40	2.80	.....	.....

	1½"	2"	2½"	3"	3½"	4"
Sheet Steel Blank Met. Cover	\$.63	\$.70	\$1.05	\$1.12	.....	.....
Cast Iron	.98	1.26	1.61	1.75	.....	.....
Porcelain with Holes	.67	.84	1.12	1.26	.....	.....
Metal with 1/4 Nipple	.82	.....	.....	.....	.....	.....
" " " "	.86	.....	.....	.....	.....	.....
" " " "	.88	.....	.....	.....	.....	.....
Porcelain with 1/4 Nipple	1.01	.....	.....	.....	.....	.....
" " " "	1.08	.....	.....	.....	.....	.....
" " " "	1.16	.....	.....	.....	.....	.....
Porcelain for Drop Cord	.....	.....	.....	.....	.....	.....
Porcelain Weatherproof Sockets	.....	.....	.....	.....	.....	.....
Composition with Holes	1.55	1.68	.....	.....	.....	.....
Composition Split with Holes	3.10	3.36	.....	.....	.....	.....

RECEPTACLES & ROSETTES

For Above

(For Description See Crouse Hinds' Catalog)	1½"	2"	2½"	3"	3½"	4"
Lamp Receptacle without Shade Holder Groove	\$.35	\$.42	\$.50	.....	.....	.....
" " with Shade Holder Groove	.42	.50	.56	.....	.....	.....
Fixture Rosette with 1/4 or 1/2 Nipple—Male or Female	.56	.63	.70	.....	.....	.....
Cord Rosette with One Outlet	.42	.50	.56	.....	.....	.....
" " Two Outlets	.50	.56	.63	.....	.....	.....
Polarity Plug Receptacle for Hubbell 6 Amp.	.56	.63	.70	.....	.....	.....
" " 20	.77	.85	.91	.....	.....	.....
Attachment Plug Receptacle for Hubbell 6 Amp.	.56	.63	.70	.....	.....	.....

FS SERIES FOR FLUSH DEVICES
Shallow Type Without Covers, Any Make

No. Gangs	No. Pipe Outlets	Series	1½"	2"	2½"	3"	3½"	4"
Single Gang	One	FS-FSA	\$.91	\$1.08	\$1.19	.....	.....	.....
" "	Two	FSC-FSL-FSR-FSLA-FSS-FSAA	1.05	1.26	1.54	.....	.....	.....
" "	Three	FSCA-FSCC-FSCT-FST	1.40	1.75	2.03	.....	.....	.....
" "	Four	FSX-FSCD	1.68	2.10	2.38	.....	.....	.....
Two Gang	One	FSC-FSA	1.68	1.82	1.96	.....	.....	.....
" "	Two	FSC	1.82	1.96	2.17	.....	.....	.....
" "	Three	FSD	2.03	2.17	2.31	.....	.....	.....
2 Gang Tandem	One	FS	2.31	2.45	2.59	.....	.....	.....
" "	Two	FSC	2.45	2.59	2.73	.....	.....	.....
Three Gang	One	FS-FSA	.....	2.52	2.73	.....	.....	.....
" "	Two	FSC	.....	2.66	2.87	.....	.....	.....
" "	Four	FSD	.....	3.01	3.32	.....	.....	.....
Four Gang	One	FS-FSA	.....	3.08	3.36	.....	.....	.....
" "	Two	FSC-FSSE	.....	3.29	3.50	.....	.....	.....
" "	Five	FSD	3.44	4.00	4.34	.....	.....	.....

COVERS FOR FS FITTINGS

Description	Single Gang	2 Gang
Metal Cover for Std. Flush Push Switches	\$.21	\$.42
" " " Tumbler or Toggle Switches	.21	.42
" " " Rotary Switches	.21	.42
Metal Cover for Single Flush Receptacle	.21	.42
" " " Duplex Flush Receptacle	.42	.84
" " " with Lift Cover	.84	1.68
" " " for Disapp. Door Receptacle	1.12	2.24
" " " with 1/4 Metal Nipple	.40	.....
" " " " "	.54	.....
" " " " "	.56	.....
Blank Metal Cover Sheet Steel	.14	.28
" " Cast-Iron	.35	.70
Porcelain Cover with Holes	.28	.....
Cast Cover with Guard for Push Switches	.49	.81

COVERS FOR FS FITTINGS—Continued

Description	3 Gang	4 Gang
Metal Cover for Std. Flush Push Switches	\$.63	\$.84
" " " Tumbler or Toggle Switches	.63	.84
" " " Rotary Switches	.63	.84
" " " Single Flush Receptacle	.63	.84
" " " Duplex Flush Receptacle	.....	.....
" " " with Lift Cover	2.52	3.36
" " " for Disapp. Door Receptacle	.....	.....
" " " with 1/4 Metal Nipple	.....	.....
" " " " "
" " " " "
Blank Metal Cover Sheet Steel	.....	.84
" " Cast-Iron	1.05	1.40
Porcelain Cover with Holes	.....	.....
Cast Cover with Guard for Push Switches	1.40	1.96

METAL COMBINATION PLATES FOR FS SERIES

2 Gang for One Switch and one Sgl. or Duplex Receptacle	\$.70
2 " " " Bull's Eye with Ruby Glass	1.75
3 " " " One Receptacle & one Bull's Eye	1.96

NOTE: Although our prices on conduit fittings apply to all makes we use Crouse Hinds' numbers and lists for convenience.

G & H WITHOUT ADJUSTABLE BAR

Type	5 Amp.	10 Amp.	15 Amp.	20 Amp.
Crouse Hinds or Similar	.....	.....	.....	.....
G.....	\$.56	\$.70	\$1.05	\$.70
GL.....	.63	.77	1.12	.77
GA-GLA-GT.....	.84	.98	1.33	.98
GTA-GX.....	1.05	1.19	1.68	1.19
H.....	.42	.56	.91	.56
HA.....	.49	.63	.98	.63
HH.....	.56	.70	1.05	.70
HHC.....	.84	.98	1.33	.98
HLA.....	.63	.77	1.12	.77

Type	5 Amp.	10 Amp.	15 Amp.	20 Amp.
Crouse Hinds or Similar	.....	.....	.....	.....
G.....	\$.90	\$1.05	\$1.40	\$.90
GL.....	1.05	1.19	1.61	1.05
GA-GLA-GT.....	1.26	1.40	1.82	1.26
GTA-GX.....	1.50	1.68	2.24	1.50
H.....	.84	.91	1.26	.84
HA.....	.91	.98	1.40	.91
HH.....	.98	1.05	1.40	.98
HHC.....	1.26	1.40	1.82	1.26
HLA.....	1.05	1.19	1.61	1.05

G & H WITH ADJUSTABLE BAR

Type	5 Amp.	10 Amp.	15 Amp.	20 Amp.
Crouse Hinds or Similar	.....	.....	.....	.....
G.....	\$.77	\$.91	\$1.26	\$.91
GL.....	.84	.98	1.33	.98
GA-GLA-GT.....	1.05	1.19	1.64	1.19
GTA-GX.....	1.26	1.40	1.89	1.40
H.....	.63	.77	1.12	.77
HA.....	.70	.84	1.19	.84
HH.....	.77	.91	1.26	.91
HHC.....	1.05	1.19	1.54	1.19
HLA.....	.84	.98	1.36	.98

Type	5 Amp.	10 Amp.	15 Amp.	20 Amp.
Crouse Hinds or Similar	.....	.....	.....	.....
G.....	\$1.26	\$1.33	\$1.68	\$1.26
GL.....	1.33	1.50	1.89	1.33
GA-GLA-GT.....	1.54	1.68	2.10	1.54
GTA-GX.....	1.75	1.96	2.52	1.75
H.....	1.12	1.19	1.54	1.12
HA.....	1.19	1.26	1.68	1.19
HH.....	1.26	1.33	1.68	1.26
HHC.....	1.54	1.68	2.10	1.54
HLA.....	1.33	1.50	1.89	1.33

COVERS FOR G & H SERIES

	Without Adjustable Bar	With Adjustable Bar
	5 Amp. 10 Amp. 20 Amp.	5 Amp. 10 Amp. 20 Amp.
Porcelain	\$.28 \$.35 \$.56	\$.21 \$.21 \$.49
Blank Metal	.21 .28 .35	.14 .14 .35
Porcelain with 1/4 Nip.	.42 .49 .70	.35 .35 .63
" " " "	.49 .56 .77	.42 .42 .84
" " " "	.56 .63 .91	.49 .49 .84
Metal	.35 .42 .49	.28 .28 .42
" " " "	.42 .49 .56	.35 .35 .49
" " " "	.49 .56 .63	.42 .42 .56


DEVICES FOR G & H SERIES

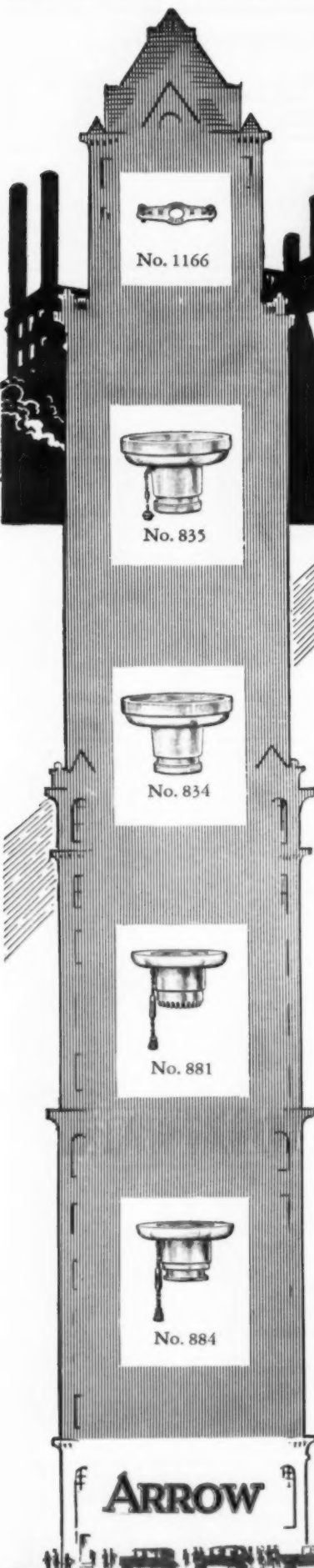
(See Page 51 Crouse Hinds Catalog No. 2000)


	Price Each
Lamp Receptacle with Shade Holder Groove No. H540	\$.70
Fixture Rosette Porcelain with 1/4 Nipple No. H540 & H548	.77
" " " " " No. H561 & H562	.91
Fixture Rosette Composition with 1/4 Nipple No. H571 & H572	1.05
Cord Rosette Porcelain H563	.60
" " Composition H564	.70
Lamp Receptacle—One Piece—No. H566 or 557	.35

J & K SERIES WEATHERPROOF


	1½"	2"	2½"	3"	3½"	4"
J.....	\$.84	\$1.05	\$1.50	.....	.....	.....
JA-JB-JU.....	.98	1.19	1.61	.....	.....	.....
IL.....	1.19	1.33	1.80	.....	.....	.....
IT.....	1.33	1.50	1.61	.....	.....	.....
IX.....	1.50	1.61	1.82	.....	.....	.....
K.....	.70	.91	1.33	.....	.....	.....
K4-KB-KC-KD.....	.84	1.05	1.80	.....	.....	.....









No. 1166



No. 837



No. 839



No. 833

For Wiring Convenience and Economy

ARROW Porcelain Receptacles fit into the picture of the Contractor's daily work to *wire modernly*. Priced to help you make your profit on speedy but sturdy wiring jobs. *ARROW* looks ahead—and *keeps* ahead of your month-to-month Wiring Device needs. Check your Receptacle-needs below:—hand to your Jobber's man.

Shallow and Deep Back—with Shadeholder Groove—Fit 3 1/4", 4" and Stud Boxes

Cat. No.		Std. Pkg.	List Price
832	Pull, for 3 1/4 in. box with chain and cord	50	.52
833	Pull, for 3 1/4 in. box with chain and insulator	50	.52
834	Keyless, for 3 1/4 in. box	50	.42
835	Pull, for 4 in. box with chain and cord	50	.65
836	Pull, for 4 in. box with chain and insulator	50	.65
837	Pull, deep back, for 4 in. box with chain and cord	10	.80
838	Pull, deep back, for 4 in. box with chain and insulator	10	.80
839	Pull bracket for 3 1/4 in. box with outlet	10	1.15
840	Pull bracket for 3 1/4 in. box without outlet	10	1.00
1166	Stud strap for 832, 833 and 834	50	.07
1167	Stud strap for 835, 836, 837 and 838	50	.07

Pull receptacles can be furnished in 660 watts at an advance in list of 8 cents

Flat Back—Lower Priced—for 3 1/4 in. boxes—with Plain or Shadeholder Rings

Cat. No.		Std. Pkg.	List Price
880	Pull, plain ring, with chain and cord	50	.40
881	Pull, plain ring, with chain and insulator	50	.40
883	Pull, shadeholder ring, with chain and cord	50	.40
884	Pull, shadeholder ring, with chain and insulator	50	.40

These receptacles can be furnished in 660 watts at an advance in list of 8 cents

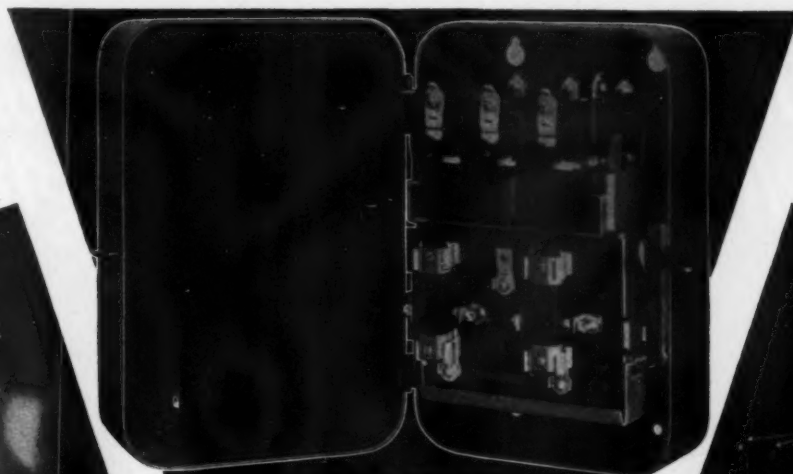
Get latest Arrow leaflet to give you a hand with *new goods*!

ARROW ELECTRIC DIVISION

THE ARROW-HART & HEGEMAN ELECTRIC CO.
HARTFORD, CONN.

Unretouched photograph of arcing accompanying the interruption of a 15 H.P. 550 volt squirrel cage induction motor by a contactor type motor starter.

Unretouched photograph of the interruption by the type A-30 under precisely duplicate conditions as that of the old type starter opposite. Hardly an arc—only a spark.



TYPE A-30

*"Hardly an Arc
Only a Spark"*

FROM NOW ON — *This is the switch to buy*

The Condit Type A-30 Motor Starter prevents arcing. Think what this means to you! Almost no burning of contacts —no gas—no danger—maintenance reduced to a minimum—the life of the switch extremely long regardless of severity of conditions. Actual comparative tests put the Type A-30 in a class by itself for performance.

Price complete with Type H-6 push button and two Type C-30 automatic re-set thermal relays —\$17.00 net, F.O.B.

Factory.

Are you willing to be shown?

"Get in touch with Condit"

CONDIT ELECTRICAL MFG. CORPORATION
Manufacturers of Electrical Protective Devices
BOSTON, MASS.

Northern Electric Company
LIMITED

Distributor for the Dominion of Canada

SPECIFICATIONS: 3 pole for across-the-line starting service with squirrel cage induction motors up to 20 H. P., 550 and 440 volts; 15 H. P., 220 volts; 7½ H. P., 110 volts.

CONDIT

Let "Diamond H" Remote Control Switches Control Airport Lighting

WHEN you figure on the flood lighting of an airport, include "Diamond H" Remote Control Switches in your circuits.

The high wattage used in these flood lights is easily handled and quickly controlled by these switches.

The control from any distant point, is also simplified, since it is not necessary to carry main conductors to switching points.

Write us for complete information, to enable you to suggest the proper switches for airport lighting, floods or beacons.

THE HART MFG. CO., Hartford, Conn.

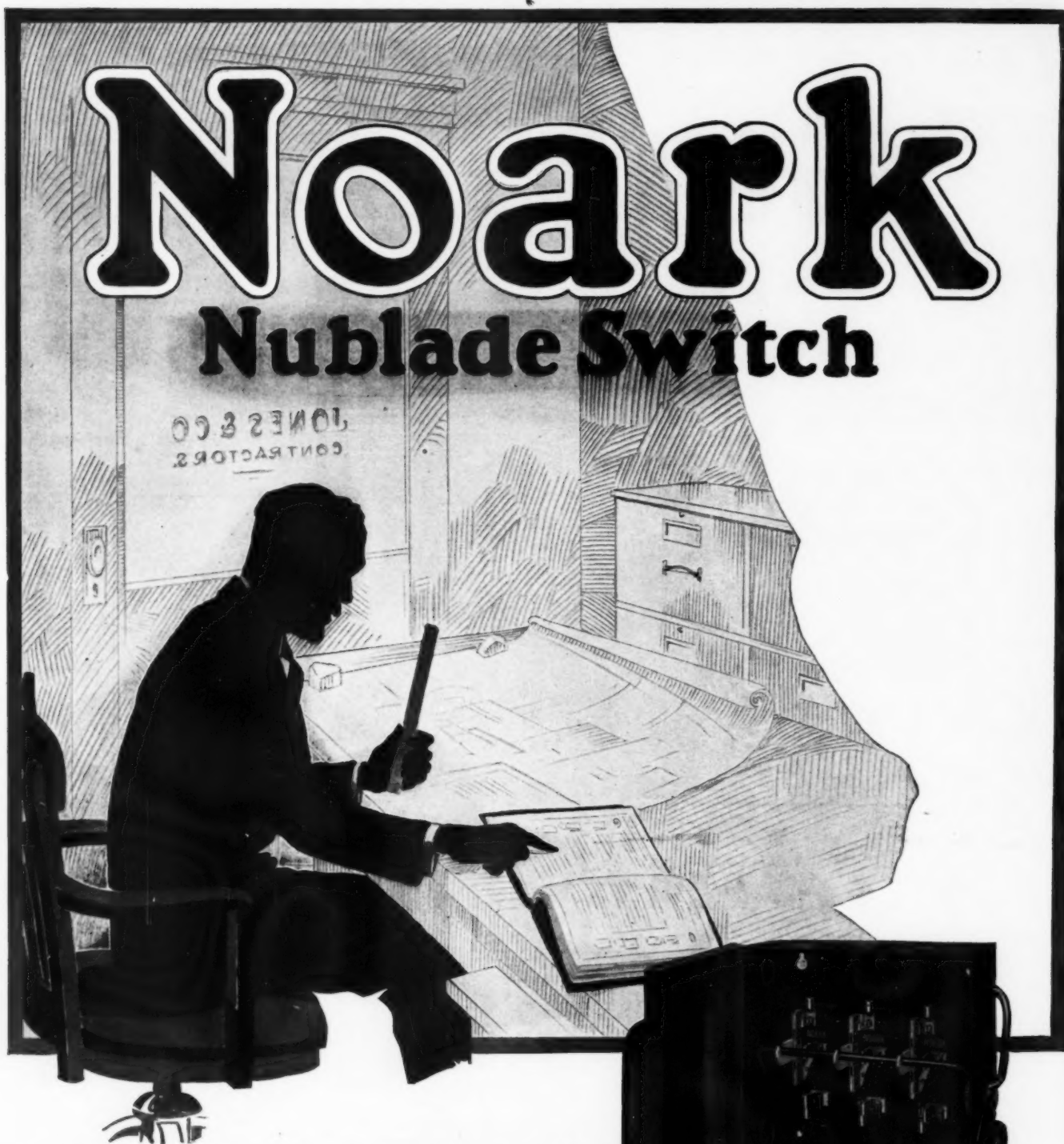
BOSTON

NEW YORK
CHICAGO
MINNEAPOLIS
TORONTO

DETROIT



DIAMOND **H** SWITCHES



"Somebody Used His Head!"

**"Whoever designed the
NOARK-NUBLADE SWITCH
surely knew about contractors' problems"**

Here is a switch built to last, and bound to give satisfaction! Easy to install! Compact, yet all the room needed to wire it—plenty of clean-cut knockouts.

COLT'S PATENT FIRE ARMS MFG. CO.
ELECTRICAL DIVISION



HARTFORD, CONNECTICUT, U. S. A.



31-N-11

NEW YORK • BOSTON • PHILADELPHIA • CHICAGO • SAN FRANCISCO

Sizes range from 30 to 600
ampere capacity

250 volts AC or DC, and 600 volts AC

2, 3, 4 or 5 pole

Fusible, non-fusible or solid
neutral types

[CATALOG ON REQUEST]

*Electrical and
Ventilating
Contractors
are
Unanimous
in their
PRAISE
of this
book*



Have
**YOU RECEIVED
YOUR COPY YET?**

This American Blower Book contains a complete sales and merchandising plan for Ventilating Contractors and Electrical Dealers—tells where and how to sell Electric Ventilation—gives complete sales and advertising plans for dealers that are simple, effective and practical—contains samples of American Blower literature, technical data and sales helps. We still have a limited number of these books available—the coupon will bring you one *free of charge*—American Blower literature will also be furnished to you and imprinted *free of charge*. Write today.

AMERICAN BLOWER CORPORATION, DETROIT, MICH.
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONT.
BRANCH OFFICES IN ALL PRINCIPAL CITIES

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Please send me, without obligation, your 1929 Sales Plan.

Name _____

Firm _____

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(858)

American Blower
VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT
MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1909

Lamp Receptacle S. H. Groove.....	\$.63
No S. H. Groove.....	.56
Fixture Rosette with Nipple.....	.56
Plug Receptacle 6 Amp.....	.70
20.....	.01
Cord Rosette.....	.49
Blank Cast Cover.....	.42

Prices are for Iron Fittings and include Guard and Globe

Prices are for Iron Fittings and include Guard and Globe

V-VA Complete as Above.....	14"	\$5.85	1"	\$6.00
VB-VC-VL Complete as Above.....		5.98		6.24
VCA-VLA-VT-VE-VS Complete as Above.....		6.17		6.56
VTA-VX Complete as Above.....		6.30		6.76
VXA Complete as Above.....		6.57		6.83
VD-VK-VP Complete as Above.....		6.37		6.50
VF-VJ Complete as Above.....		6.70		6.83

Prices are for Iron Fittings and include Guard and Globe		Form 200	
	^{1/2"}	^{3/4"}	^{1"}
V-VA Complete as Above.....	\$7.02	\$7.00	\$7.16
VB-VC-VL Complete as Above.....	7.15	7.28	7.35
VCA-VLA-VT-VE-VS Complete as Above.....	7.28	7.50	7.63
VTA-VX Complete as Above.....	7.41	7.67	7.87
VYA-VYA Complete as Above.....	7.48	7.77	7.93
VF-VG-VP Complete as Above.....	7.48	7.60	7.73
VD-VJ Complete as Above.....	7.67	7.80	7.93

	Form 75	Form 200
Guard with Half Metal Shade.....	\$3.90	\$4.20
" " Gauge Metal Shade.....	6.50	7.80
" " without Shade.....	2.34	2.95
Globes only, clear.....	1.12	1.12
" " opal.....	1.54	2.38
" " green-blue & orange.....	2.38	3.30
" " ruby.....	3.30	4.06
Brass Reflector Holder Galv. Finish.....	1.96	3.31
Threaded Blank Covers Iron Black Finish.....	1.05	1.40
Sealing Plate Iron Galv. Finish.....	.21	.35
Receptacle with Gasket & Screws.....	.56	.66

For Type GS Fittings

(Page 89 Crouse Hinds Catalog No. 2000)

		Form 75	Form 200
		Iron	Brass
Pendant or Bracket Type Complete...	\$7.93	\$11.18	\$8.80
Receptacle Only.....			\$12.42
			.66

NOTE: Above numbers and figures are for Crouse Hinds' make or similar

STANDARD TYPES

"Kondu" "Appleton" or Similar

Types Without Covers	1 st	1 st	1 st	1 st
A.....	\$.46	\$.62	\$.84	\$1.26
B.....	.53	.70	.95	1.47
BE.....	.95	1.23	1.79	2.74
C.....	.74	.94	1.33	2.03
CB.....	1.04	1.34	1.86	2.80
D.....	.74	.94	1.29	2.03
E.....	.53	.67	.94	1.48
LB-LF-LL-LR.....	.81	.98	1.40	2.17
SE.....	.81	1.09	1.71	2.66
T-TL-TR.....	1.04	1.34	1.85	2.80
TB.....	1.47	1.82	2.38	3.64
U & UB.....	.91	1.12	1.54	2.52
X.....	1.33	1.82	2.45	3.43
XB.....	2.03	2.52	3.29	.....

Types	1½"	2"	2½"	3"
Without Covers				
A.....	\$1.61	\$3.15	\$ 6.65	\$ 8.10
B.....	1.96	3.85	6.65	8.10
CE.....	3.64	6.30	11.70	13.30
C.....	2.66	5.11	8.55	11.15
CB.....	3.85	6.16	9.90	14.30
D.....	2.66	5.11	8.55	11.15
E.....	1.96	3.85	6.65	8.00
LB-LF-LL-LR.....	2.94	5.18	8.80	11.50
SE.....	3.99	7.00	11.85	14.85
T-TL-TR.....	3.85	6.16	9.90	14.40
TB.....	5.18	9.00	.....	.....
U & UB.....	3.29	6.00	10.10	13.20
X.....	4.48	8.33	12.35	19.15
XB.....	.....	.....	.....	.....

H Couplings.....	1/4"	3/8"	1"	1 1/2"
NO Box Connector.....	\$.32	\$.48	\$.83	\$1.11
NO " ".....	.20	.29	.67	1.34
NO " ".....	.24	.31	.56	.84
SCA Cable Connector.....	.13	.17	.24
SLP Short Elbow.....	.39	.52	.83	1.00
KOL Box Connector.....	.43	.57	.98	1.54
KOR Reducer.....	.58	.63
H Couplings.....	1 1/2"	2"	2 1/2"	3"
NO Box Connector.....	\$1.64	\$3.21	\$4.00	\$6.37
NO " ".....	1.18	2.49	3.28	4.30
SCA Cable Connector.....
SLP Short Elbow.....	1.23	2.66
KOL Box Connector.....	2.07	4.20
KOR Reducer.....

	3/8"	3/4"	1"	1 1/2"
Blank Metal.....	\$.11	\$.15	\$.32	\$.45
Rubber Gasket.....	.14	.14	.21	.28
Metal, 3/4 Nip.....	.28	.35	.49	.64
" 3/4 ".....	.32	.39	.53	.69
" 3/4 ".....	.35	.42	.56	.71
" 3/4 ".....	.42	.49	.63	.78
Porcelain with Holes.....	.14	.21	.35	.50
Metal, Cord Grip.....	.28	.35	.49
	1 1/2"	2"	2 3/4"	3"
Blank Metal.....	\$.63	\$.78	\$1.05	\$1.05
Rubber Gasket.....	.28	.66	.84	.84
Metal, 3/4 Nip.....	.81
" 3/4 ".....	.85
" 3/4 ".....	.88
" 3/4 ".....	.95
Porcelain with Holes.....	.67	.84	1.12	1.12
Metal, Cord Grip.....

			1/4"	3/4"	1"
Lamp Recept. with Shade Holder Groove PR...			\$.35	\$.42	\$.49
" " with Shade Holder Groove PRS.....			.42	.49	.56
Porcelain for Weatherproof Socket WP2.....			.28
Polarity Plug Receptacle 10 Amp. P.....			.56	.63	.70
" " Duplex PD.....		70	.78
				Sgle. Pole	Dble. Pole
Snap Switch 5 Amp. 125 Volt Non Indicating....			\$.70	...	3 Pole
" " 5 " 125 " Indicating.....			.77
" " 10 " 125 " Non-Indicating.....			1.12	\$1.47	1.47
" " 10 " 125 " Indicating.....			1.26	1.68	...

"Kondu" or Similar

Type	1 Gang			2 Gang		
	1/2"	3/4"	1"	1/2"	3/4"	1"
FSE-FSB.....	\$1.05	\$1.26	\$1.40	\$1.82	\$2.03	\$2.24
FSC-L & R.....	1.33	1.61	2.03	2.10	2.31	2.66
FST.....	1.75	2.31	2.73	.....	.....	.....
FSU.....	1.26	1.61	2.03	.....	.....	.....
FSD.....	1.75	2.31	2.73	2.38	2.73	3.08

Type	3 Gang			4 Gang		
	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
FSE-FSB.....		\$2.76	\$2.97		\$3.36	\$3.64
FSC-L & R.....		3.08	3.36		3.71	3.99
FST.....						
FSU.....						
FSD.....	\$3.22	3.57	3.85	\$4.27		

	One Gang	2 Gang
Blank Metal Plate.....	\$.37	\$.70
Receptacle Plate.....	.28	.38
Toggle or Push Button Switch Plate.....	.38	

Type	5 Amp.		10 Amp.		
	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
OA.....	\$.63	\$.64	\$.77	\$1.05	\$1.33
OC.....	.77	1.05	.91	1.26	1.68
OCB.....	1.19	1.54	1.33	1.75	2.24
OE.....	.56	.77	.70	.98	1.26
OEB.....	.91	1.12	1.05	1.33	1.75
OL.....	.91	1.12	1.05	1.33	1.75
OLB.....	1.19	1.54	1.33	1.75	2.24
OT.....	1.19	1.54	1.33	1.75	2.24
OTB.....	1.54	1.96	1.68	2.10	2.80
OU.....	.77	1.05	.91	1.26	1.68
OUE.....	1.19	1.54	1.33	1.75	2.24
OX.....	1.54	1.96	1.68	2.10	2.80
OXB.....	1.89	2.31	2.03	2.52	3.36

Type	1/4"	3/4"	1"
OA	\$1.05	\$1.19	\$1.61
OC	1.19	1.40	1.90
OCB	1.61	1.96	2.52
OE	.98	1.12	1.47
OEB	1.33	1.54	2.10
OL	1.33	1.54	2.10
OLB	1.61	1.96	2.59
OT	1.61	1.96	2.59
OTB	1.96	2.38	3.22
OU	1.12	1.47	1.90
OUE	1.61	1.96	2.52
OX	1.96	2.38	3.22
OXB	2.31	2.87	3.78

	5	10	20
	Amp.	Amp.	Amp.
Blank Metal Cover, Round.....	\$.21	\$.28	\$.35
Porcelain Cover, Round with holes.....	.21	.28	.35
Metal Cover with ¼ or ⅝ Cord Grip.....	.35	.42	.49
Blank Metal Cover with ¾ male or female nipple.....	.35	.42	.49
" " " " ¾ " " " "	.42	.49	.56
" " " " ¾ " " " "	.49	.56	.63
" " " " ¾ " " " "	.56	.63	.70
Rubber Gaskets.....	.14	.14	.21
Lamp Receptacles Porcelain Edison Base.....	.42	.40	..
" " Composition T Slot.....	.84

REDUCING BUSHINGS

Large End	Small End	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Small End 1/2"	1/2"	\$.41	\$.53	\$.71	\$.80	\$1.05	\$1.40	\$1.55	
" " 3/4"	3/4"		.60	.76	.90	1.19	1.60	1.67	
" " 1"	1"			.81	.94	1.29	1.60	1.86	
" " 1 1/4"	1 1/4"				1.13	1.43	1.90	2.42	
" " 1 1/2"	1 1/2"					1.51	1.90	2.42	
" " 2"	2"						2.27	2.97	
" " 2 1/2"	2 1/2"							3.26	

FITTINGS, SPRAGULETS, WIRELETS
OR T & BBRANCH TYPE
Series 48

Description	G.E., Steel City or T & B Numbers	Price Each
Branch Body for 1/2" & 3/4" Rectangular Shape....	SP-48241	\$.27
Cover Metal Flat Closed.....	SP-48C1	.11
" " " with 1/2" Knockout.....	SP-48C6	.11
" " " Pendant Type with 1/2" Bushing.....	SP-48C8	.12
" " " Pendant Type with 3/4" Bushing.....	SP-48C11	.16
" " " with 1/2" Male or Female Nipple.....	SP-48C22 & 23	.30
" " " with 3/4" Male or Female Nipple.....	SP-48C24 & 25	.41
Cover Porcelain with one or two wire Holes.....	SP-48C75 & 76	.14
" " " three or four wire Holes.....	SP-48C77 & 78	.15
" " " 1/2" Male or Female Nipple.....	SP-48C82 & 83	.29
" " " 3/4" Male or Female Nipple.....	SP-48C84 & 85	.41

SHALLOW TYPE
Series 14

Description	G.E., Steel City or T & B Numbers	Price Each
Body Octagonal Shape for 1/2" & 3/4".....	SP-14241	\$.35
Cover Metal Flat Closed.....	SP-14C1	.11
" " " Raised with 1/2" Knockout.....	SP-14C7	.11
Cover Metal Flat Pendant with 1/2" Bushing.....	SP-14C8	.12
" " " with 1/2" or 3/4" Male or Female Nip.....	SP-14C11	.16
" " " For all surface Mounted Devices.....	SP-14C22-23-24-25	.29
" " " Raised for Sign Receptacles.....	SP-14C31-32-34-35-36	.12
" " " Flat for all Fluted Devices.....	SP-14C39	.35
" " " Porcelain with one or two holes.....	SP-14C75 & 76	.14
" " " Three or Four holes.....	SP-14C77 & 78	.15
Cover Porcelain with 1/2" Male or Female Nipple.....	SP-14C82 & 83	.29
" " " 3/4" Male or Female Nipple.....	SP-14C84 & 85	.41
Raised Angle Adaptor for Device Covers.....	SP-14C47	.26
" " " with Uno Shade Holder.....	SP-14C67	.60

DEEP TYPE
Series 34

Description	G.E., Steel City or T & B Numbers	Price Each
Body Deep Octagonal Shape 1/2" & 3/4".....	SP-34461	\$.47
Cover Metal Blank Flat.....	SP-34R1	.14
Cover Metal For Flush Switches.....	SP-34R2 & 3	.14
" " " Rotary Switches.....	SP-34R4	.14
" " " Receptacles without Door.....	SP-34R5	.14
" " " Receptacles with Door.....	SP-34R6	.41
" " " Standard Dble. Plug Receptacle.....	SP-34R7	.14
" " " Hubbell Dble. Plug Receptacle.....	SP-34R8	.24
" " " Chapman Recept. with Doors.....	SP-34R9	.60
" " " For GE 30 Amp. Polarized Plug Recept.....	SP-34R13	.17
" " " GE Tumbler Switches.....	SP-34R14	.14
" " " Hubbell and H&H Tumbler Switches.....	SP-34R15 & 16	.19

COUPLINGS

Description	Price
SP-1410 Complete Coupling for 1/2" Conduit.....	\$.16
SP-1420 " " " 3/4" ".....	.24

FITTINGS, ENTRANCE

"ADAPTI"

Description	1/2"	3/4"	1"	1 1/4"
Ent. Ells with Cov. Ser. 1100.....	\$.50	\$.60	\$.65	\$1.35
" " Fitt. with Cov. Ser. 2703 to 30.....	.45	.55	.65	1.20
Angle Ent. Fitt. with Cover Ser. 27370 to 79.....	.50	.55	.65	1.20
Signal Ent. Caps No. 2810-2811.....	.65	.70		
Ent. Ells with Cov. Ser. 1100.....	\$1.60	\$2.85	\$3.25	\$7.65
" " Fitt. with Cov. Ser. 2703 to 30.....	2.05	3.15	3.60	7.50
Angle Ent. Fitt. with Cov. Ser. 27370 to 79.....	2.00	3.20	3.60	7.50
Signal Ent. Caps No. 2810-2811.....				

"UNILETS"

Description	1/2"	3/4"	1"	1 1/4"
FEB Elbow with Cov. 1700 & 1900.....	\$.50	\$.60	\$.70	\$1.70
FB Elbow with Cov. 1713 to 16.....	.35	.50	.60	
FC End Fitt. with Cov. 1723-33-43.....	.20	.25	.30	
AY Angle Fitt. 1950 to 54.....	.55	.60	.70	1.95
LAY End Fitt. with Cov. 1790 to 94.....	.55	.60	.75	1.35
FEB Elbow with Cov. 1700 & 1900.....	\$1.90	\$3.25	\$7.50	\$9.00
FB Elbow with Cov. 1713 to 16.....				
FC End Fitt. with Cov. 1723-33-43.....				
AY Angle Fitt. 1950 to 54.....	2.35			
LAY End Fitt. with Cov. 1790 to 94.....	1.75			

"BEND HICKS"

Description	1/2"	3/4"	1"	1 1/4"
Bend Hicks Galvanized.....	\$.50	\$.60	\$.65	\$1.75
Bend Hicks Galvanized.....	\$2.15	\$4.10	\$6.00	\$7.50

"CONDULETS"

Form 6

Description	1/2"	3/4"	1"	1 1/4"
F Type Ent. Fitt. with Porc. Cov.....	\$.40	\$.45	\$.60	\$.85
LB Type Ent. Fitt. with Metal Cov.....	.45	.50	.60	1.15
F Type Ent. Fitt. with Porc. Cov.....	\$1.60	\$2.85		
LB Type Ent. Fitt. with Metal Cov.....	1.40	2.45		

"ELECTROLETS"

Description	1/2"	3/4"	1"	1 1/4"
FB Angle Fitt. with Cov. 703-83.....	\$.40	\$.50	\$.65	\$1.00
KA End Fitt. with Cov. 1013 to 43.....	.20	.25	.25	.30
KB Elbow Fitt. with Cov. 1113 to 33.....	.30	.45	.55	
SLB Elbow Fitt. with Cov. 1 to 4.....	.50	.60	.75	1.30
Y Capped Elbow Y1 to 5.....	.50	.60	.70	1.75
FB Angle Fitt. with Cov. 703-83.....	\$1.75	\$3.00	\$6.75	\$8.50
KA End Fitt. with Cov. 1013 to 43.....				
KB Elbow Fitt. with Cov. 1113 to 33.....				
SLB Elbow Fitt. with Cov. 1 to 4.....				
Y Capped Elbow Y1 to 5.....	2.10			

G. E. See T & B below

GEE-VEE

Description	1/2"	3/4"	1"	1 1/4"
F Service Cap Series 6000.....	\$.45	\$.50	\$.70	\$1.00
B " " " 16000.....	.45	.50	.70	1.00
F Pipe " " " 1000-1310.....	.40	.50	.70	.85
B " " " 2000 & 2100.....	.37	.45	.65	.75
FB Universal " 3000.....	1.00	1.25	1.65	2.75
Weathercap " 40122.....	.50	.50		
Service Elbow " 19000.....	.40	.55	.65	1.90
A Terminal " 10000.....	.40	.45	.70	1.05
Endo Terminal Series 90000.....	.15	.20	.25	
F Service Cap Series 6000.....	\$1.90	\$3.35	\$7.50	\$7.70
B " " " 16000.....	1.90	3.35	7.50	7.70
F Pipe " " " 1000-1310.....	1.20	1.70	3.00	4.15
B " " " 2000 & 2100.....	1.05			
FB Universal " 3000.....	3.75	5.40	9.50	12.70
Weathercap " 40122.....				
Service Elbow " 19000.....				
A Terminal " 10000.....	1.40	2.40	4.55	7.40
Endo Terminal " 90000.....				

"GEM POWERLETS"

Description	1/2"	3/4"	1"	1 1/4"
MA Fittings with Porc. Cover.....	\$.25	\$.37	\$.45	\$.70
MB " " " ".....	.35	.50		
MF & MFF Fitting with Porc. Cover.....	.47	.60	.70	1.75
MFB Fitting with Porc. Cover.....	.35	.50	.65	
MLB Fitting with Metal Cover.....	.52	.58	.85	1.35
MPA Fitting with Porc. Cover.....	.15	.22		
MY.....	.52	.62	.80	
MRA.....	.50			
MA Fitting with Porc. Cover.....	\$.95	\$1.90	\$3.50	\$5.95
MB " " " ".....				
MF & MFF Fitting with Porc. Cover.....	1.90	3.30	7.40	9.00
MFB Fitting with Porc. Cover.....				
MLB Fitting with Metal Cover.....	1.70			
MPA Fitting with Porc. Cover.....				
MY.....				
MRA.....				

T & B

Description	1/2"	3/4"	1"	1 1/4"
Ent. Cap 1525-32 with Cover.....	\$.45	\$.50	\$.65	\$1.00
Capped Elbow 1470-84 with Cover.....	.50	.60	.70	1.80
Insulets 1610-11-12 with Cover.....	.15	.20	.25	
Angle Insulets 1640-1-2 with Cover.....	.35	.50	.60	
Cable Insulets 2000 with Cover.....	.15			
Ent. Cap 1525-32 with Cover.....	\$1.75	\$3.00	\$6.80	\$8.50
Capped Elbow 1470-84 with Cover.....	2.10			
Insulets 1610-11-12 with Cover.....				
Angle Insulets 1640-1-2 with Cover.....				
Cable Insulets 2000 with Cover.....				

FITTINGS, "ADAPTI"

ROUND "ADAPTI" BOXES

Series Numbers	Style	1/2"	3/4"	1"
No. 02900.....	1 Back Outlet	\$.40		
No. 2900-1-2-3.....	" " "	.36	.48	.60
No. 3000 to 3005.....	1 Side Outlet	.43	.50	.74
No. 3100 to 3105.....	" " "	.40	.48	.60
No. 3100T & 3101T Thrdls.....	" " "	.48	.55	
No. 31700 to 3175.....	" " "	.47	.54	.67
No. 3200 to 3205.....	2 " " "	.48	.54	.74
No. 3200T & 3201T Thrdls.....	" " "	.60	.68	
No. 3270 to 3275.....	" " "	.60	.67	.94
No. 32170 to 32175.....	" " "	.54	.60	1.00
No. 3300 to 3305.....	3 " " "	.64	.88	.98
No. 3300T to 3305T Thrdls.....	" " "	.82	.95	
No. 33170 to 33175.....	" " "	.71	.83	1.07
No. 3400 to 3405.....	4 " " "	.80	1.05	1.20
No. 3500 to 3705.....	2 " " "	.54	.60	.75
No. 3800 to 3805.....	" " "	.54	.60	.80
No. 3900 to 4005.....	3 " " "	.80	.93	1.08
No. 4800 to 5005.....	4 " " "	.94	1.03	1.34

PL-14

Fittings, Conduit

Knobs, Tubes & Cleats

ROUND "ADAPTI" BOXES—Continued

Series Numbers	Style	1 1/4"	1 1/2"	2"
No. 02900	1 Back Outlet			
No. 2900-1-2-3	"	\$1.10		
No. 3000 to 3005	1 Side Outlet	1.30	\$2.00	\$2.75
No. 3100 to 3105	"	1.10	1.80	2.40
No. 3100T & 3101T Thrdls.	"			
No. 31700 to 3175	"	1.15	1.85	2.45
No. 3200 & 3205	2 " "	1.25	2.13	2.75
No. 3200T & 3201T Thrdls.	"			
No. 3270 to 3275	"	1.40	2.28	2.88
No. 32170 to 32175	"	1.34	2.20	2.80
No. 3300 to 3305	3 " "	1.96	2.68	3.00
No. 3300T to 3305T Thrdls.	"			
No. 33170 to 33175	"	1.70	2.75	3.10
No. 3400 to 3405	4 " "	1.87	2.90	3.35
No. 3500 to 3705	2 " "	1.40	2.28	3.35
No. 3800 to 3805	"	1.40	2.28	3.35
No. 3900 to 4005	3 " "	1.85	2.90	4.00
No. 4800 to 5005	4 " "	1.95	3.55	4.70

PARTS For Above Boxes

Series No.	Description	1 1/4"	1 1/2"	2"
500-501-502	Base Only	\$.27	\$.27	\$.54
500X-501X	Extension Ring	.27	.27	.40
501A	Base Concealed to Expd.	.67	.67	.67
0500	" with Tapped Boss	.34	.34	.52
510 to 512	Base	.40	.40	.80
520 to 522	"	.27	.27	.52
530	"	1.80	1.80	
540 to 542	"	.27	.27	.52
30 to 35	Metal Side Plates	.14	.14	.20
40 to 42	Insulated Side Plates	.16	.16	.34
50 to 54	Arm'd. Flex. Side Plates	.34	.43	.52
60 to 65	Angle Outlet	.15	.24	.43
70 to 75	Elbow Outlet	.24	.30	.50
90 to 93	Connecting Outlet	.28		.25
100 & 101	Straight for No. 500 Base	.15	.24	
110 to 113	" " No. 501 "	.28	.34	.43
120 to 125	" " No. 502 "	.47	.53	.67
130 to 135	" " No. 503 "	1.08	1.33	1.60
140 to 145	" " No. 504 "	2.67	3.08	3.48
300 & 301	Threadless Outlet	.20	.28	
310 & 311	"	.34	.40	

Series No.	Description	1 1/4"	1 1/2"	2"
500-501-502	Base Only	\$.54	\$1.08	\$1.08
500X-501X	Extension Ring	.40		
501A	Base Concealed to Expd.	.67		
0500	" with Tapped Boss			
510 to 512	Base	.80	1.60	1.60
520 to 522	"	.52	1.08	1.08
530	"			
540 to 542	"	.52	1.08	1.08
30 to 35	Metal Side Plates	.20	.38	.38
40 to 42	Insulated Side Plates	.34	.67	.67
50 to 54	Arm'd. Flex. Side Plates	.67		
60 to 65	Angle Outlet	.48	.94	1.08
70 to 75	Elbow Outlet	.55	1.00	1.14
90 to 93	Connecting Outlet		.30	.47
100 & 101	Straight for No. 500 Base			
110 to 113	" " No. 501 "	.48		
120 to 125	" " No. 502 "	.80	.94	1.07
130 to 135	" " No. 503 "	1.88	2.14	2.40
140 to 145	" " No. 504 "	3.87	4.28	4.67
300 & 301	Threadless Outlet			
310 & 311	"			

COVERS For Round Adapti Boxes

Numbers	Description	Price
1	Porcelain One Hole Cover	\$.18
2	Metal For Devices	.30
3	Porcelain One Hole Cover	.30
4	Porcelain	.22
5 & 6	Porcelain with 1/2" Male or Female Nipple	.38
7 & 8	"	.53
9 & 10	Malleable with 1/2" Male or Female Nipple	.30
11 & 12	"	.38

NOTE: For "Adapti" Entrance Fittings See Page PL-13.

"GROUNDULET" FITTINGS

Crouse Hinds—Appleton & Similar Type GCA

Without Soldering Lug	Price
Fitting No. GCA-12 For 1/2" Conduit	\$.77

Type GCD

With Angle Adjustment	Price
GCD-12 For 1/2" Conduit without Lug with one Strap	\$.90
GCD-22 For 3/4" Conduit with Lug with two Straps	1.77
GCD-32 For 1" Conduit with Lug with three Straps	2.61

Type GCE & GCEE

Size of Conduit	1 1/4"	1 1/2"	2"
Outside Diameter	1 1/4" to 1 1/2"	1 1/2" to 1 3/4"	1 3/4" to 2"
of Water Pipe	2 3/4" to 3"	3" to 3 1/2"	3 1/2" to 4"
Number	12	14	16
Price	\$1.58	\$1.80	\$2.16

Type GCE

With Threaded Plug Terminal	Price
GCE-142 For 1/2" Conduit without Lug	\$.90
GCE-242 " 3/4" " with Lug	1.04
GCE-342 " 1" " with Lug	1.17

Type GC

For Open Ground Wire	Price
GC-92 Cast Brass with No. 4 Lug	\$.72
GC-922 " " " 00 Lug	1.44

GC BRASS BUSHINGS For Ground Fittings

Size	1 1/4"	1 1/2"	2"
Number	251	252	253
Price	\$.20	\$.24	\$.31
Size	1 1/4"	2"	2 1/2"
Number	255	256	277
Price	\$.40	\$.61	\$1.00

TERMINALS, LUGS, JUMPERS, CLIPS, ETC.

	Price
Soldering Lug GCA-130 For GCA & GCD Fittings	\$.06
Water Meter Shunt No. GC-192	1.80
Strap Clamp Terminal For Water Pipe—1/2" to 2 1/2" No. GCE-012	1.04
" " " " " 1/2" to 4 1/2" No. GCE-014	1.26
" " " " " 1/2" to 6 1/2" No. GCE-016	1.62
Conduit End Terminal 1/2" No. GCE1	.36
" " " 3/4" No. GCE2	.50
" " " 1" No. GCE3	.63
Jumper Strap No. GC110	.15
Threaded Plug Terminals, Iron No. GCE042	.36
" " " Brass No. 082	.72
Jumper Cable No. GC800, Per Foot	.18
Jumper for Bonding Conduit 8" Long, No. 808 Per Foot	.40
" " " 12" " No. 812 "	.53
Soldering Lug Brass for 1/2" Conduit No. 130	.20
" " " 3/4" or 1" No. 160	.30
Brass Stud Double End Fits Bushings 1/2" to 6" No. GC52	.20
Soldering Clips for Bushings 1/2" to 1 1/2" " "	.05
" " " 2" to 6" " "	.09
Grounding Strap, No. GC100, Per Foot	.25
Strap Clamp, Steel No. GC101	.35
" " Brass No. GC102	.65

FITTINGS OR BOX CONNECTORS, ARMORED CABLE

For BX or Armored Cable	Size of K. O.	Price Each
Description		
Standard Squeeze Connector 1/2-1/2	1 1/2"	\$.06
" Set Screw Connector 1/2-1/2	1 1/2"	.06
" Slip In Connector 1/2-1/2	1 1/2"	.06
" Duplex Connector 1/2-1/2	1 1/2"	.18

STRAIGHT

BOX CONNECTORS	Squeeze or Tangent Type	Price Each
	1 1/2"	.18
	1 3/4"	.30
	1 1/2"	.50
	1 3/4"	.65
	2"	.85
	2 1/2"	1.25

90 DEGREE ANGLE BOX CONNECTOR

Squeeze or Tangent Type	Price Each
1 1/2"	.32
1 3/4"	.40
1 1/2"	.75
1 3/4"	1.00
2"	1.25

45 DEGREE ANGLE BOX CONNECTOR

Squeeze or Tangent Type	Price Each
1 1/2"	.35
1 3/4"	.46
1 1/2"	.63
1 3/4"	.93
2"	1.30
2 1/2"	1.88
3"	2.58

PANEL BOX CONNECTOR

Straight Type With Locknut	Price Each
1 1/2"	.36
1 3/4"	.38
1 1/2"	.42
1 3/4"	.54
2"	.65
2 1/2"	.90
3"	1.10
3 1/2"	1.60

COUPLINGS FOR FLEXIBLE STEEL CONDUIT

For 1/2" Conduit	Price Each
" 1 1/2"	.32
" 1 3/4"	.44
" 1 1/2"	.52
" 1 3/4"	.72
" 2"	.90
" 2 1/2"	1.37

COUPLINGS FOR RIGID TO FLEXIBLE CONDUIT

For 1/2" Conduit	Price Each
" 1 1/2"	.32
" 1 3/4"	.44
" 1 1/2"	.52
" 1 3/4"	.72
" 2"	.90
" 2 1/2"	1.37

Bushings or Ferrules—Brass .02

FITTINGS FOR "OVALFLEX" ARMORED CABLE

Number	Description	Price
2150-57-60-61	Straps—Fasteners & Bushings	\$.02
2150	Toggle with Wire Loop	.03
2176-2180-2154	Set Screw Connector	.15
2179-2181	Special Box Connector	.10
2155-2156	90 Degree Box Connector	.35
412-413	Connector for Ovalflex to Metal Molding	.35
0050-S	Squeeze Connector	.10

KNOBS, TUBES & CLEATS, PORCELAIN

Type	With Screw	With Nail	Without Screws
No. 5 1/2 Split Knobs	\$.02 1/4		\$.02
5 1/2 Solid Knobs	.03		.02 1/4
5 1/2 Nailit		\$.02 1/4	
5 1/2 Screwit	.04		
4 & 4 1/2 Knobs Solid	.05		.04
No. 9419 Split 1 1/2 x 1 1/2			.07
9420 Split 1 1/2 x 2 1/2			.12
22 Victor Split			.12
6061 Solid Teleph. 2 Groove			.10
6062			.12
103 & 107 Hemingway Break Knobs			.15

TUBES

Diam.	3' & under	4'	5'	6'	8'	10'	12'	14'	16'
Price Each	\$.01	\$.01 1/4	\$.02	\$.02 1/4	\$.06	\$.10	\$.16	\$.22	\$.27
1/2"	.01 1/4	.02	.02 1/4	.03	.07	.12	.18	.24	.29
3/4"	.02 1/4	.03	.04	.05	.09	.14	.20	.25	.31
1"	.04	.05	.06	.07	.10	.15	.22	.28	.34
1 1/4"	.06	.07	.09	.10	.12	.20	.25	.32	.40

CLEATS

2 & 3 Wire

Standard No. 334	2 & 3 Wire	Unglazed Cleats without Screws	.....	\$ .02 1/2
		Glazed	.....	.05

ONE WIRE CLEATS

B & D Type—2 Piece

New No.	Old No.	Description	For Size Wires	Price Each
115	1A	Light Cap & Heavy Base...	14 to 6	\$.08
116	1A	" " " "	6 2	.08
117	2A	" " " "	2 0	.10
118	2A	" " " "	0 000	.12
119	3A	" " " "	.000 200,000 CM	.15
120	1B	Heavy Cap & Heavy Base...	14 6	.08
121	1B	" " " "	6 2	.10
122	2B	" " " "	2 0	.12
123	2B	" " " "	0 000	.13
124	3B	" " " "	.000 200,000 CM	.16
125	3B	" " " "	10 Duplex	.17
126	3B	" " " "	2 500,000 CM	.20
127	4B	" " " "	5 1,000,000 CM	.25
128	4B	" " " "	8 1,250,000 CM	.30
129	4B	" " " "	.1M 2 Mill. C.M	.40

LOOM & L-SUNDRIES

LOOM, NON-METALLIC CONDUIT

Size	$\frac{1}{16}$ "	$\frac{1}{8}$ "	$\frac{3}{16}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	1"
Price per Foot.....	\$.03	\$.03	\$.06	\$.10	\$.13	\$.16	\$.23

SOLDERING LUGS

One Hole

For Wire Size	Amps.	Size Wire Hole	Price Each
No. 10 Under	25	1/8"	\$.04
8	35	1/8"	.04
6	50	1/8"	.05
4	70	1/8"	.06
2	90	1/8"	.07
0	125	1/8"	.09
00	150	1/8"	.12
000	175	1/8"	.17
0000	225	1/8"	.21
250 M. C. M.	237	1/8"	.36
400 M. C. M.	325	1/8"	.47
450 M. C. M.	362	1"	.62
500 M. C. M.	400	1 1/8"	.66
600 M. C. M.	450	1 1/2"	.71
800 M. C. M.	550	1 3/4"	.80
1000 M. C. M.	650	1 7/8"	1.03

For 2-Hole Lugs
Up to 237 Amps. add 75% to above prices.
Over 237 " 50% "

CONDUIT LOCKNUTS

Also on Page PL-8

Size	Price
1 1/2	.01
1 1/4	.0115
1 1/2	.0225
1 1/4	.06
1 1/2	.10
2 1/4	.14
2 1/2	.24
3 1/4	.38
3 1/2	.50
4 1/4	.68

LINKS

For Chain

Non-Insulating Splicing Links—Any Make—Each.....	\$.06
Insulating.....	.15

Luminous Acorns—See Page PL-4 and Page PL-18.

MOLDING, NATIONAL

MOLDING

Nos. 022 & 222 Molding For Two Wires—Per Foot.....	\$.10
" 033 & 044 " " Two to Four Wires—Per Foot.....	.11

FITTINGS

No.	Description	Price Each	No.	Description	Price Each
200-201	Bushing.....	\$.01	334	Cross.....	\$.35
223	Clip.....	.02	345	90 Deg. Elbow.....	.22
234	Coupling.....	.04	336	90 Ext. Elbow.....	.20
235	Cross.....	.43	337B	Cap for Elbow.....	.10
236	Tee.....	.24	338	90 Deg Int. Elbow.....	.22
237	90 Deg. Elbow.....	.20	338B	Cap for Int. Elbow.....	.12
238-9	45 ".....	.20	339	Drop Cord Box.....	.37
245	90 ".....	.20	341	Junction Box.....	.40
245	Single Strap.....	.02	342	Surface Box.....	.40
255	Ground Clamp.....	.04	344	Base Coupling.....	.04
278	Adaptor.....	.05	345	Single Strap.....	.02
300	.....	.08	348	Cord Rosette.....	.32
301	Box Connector.....	.15	354	Double Strap.....	.02
303	Adaptor.....	.04	355	354 and Clamp.....	.05
315	Connector.....	.35	356-7	Keyless Socket.....	.65
316	90 Deg. Coupling.....	.30	360	Conven. Outlet.....	.75
317	90 " Connector.....	.30	363	4 1/2" Plate.....	.35
321A & B	Rawl Plug.....	.04	363A	4 1/2" Cover.....	.24
323	Joint Cap.....	.02	363B	4 1/2" ".....	.28
332	Coupling & Supp.....	.05			

FITTINGS—Continued

[illegible]

OVALDUCT

3 Wire Per Foot \$.18

OVALDUCT FITTINGS

No.	Description	Price Each
401	Box Connector with $\frac{3}{4}$ " Locknut.....	\$.15
2133	Squeeze Type Coupling $1\frac{1}{4}$ " long.....	.15
2134	90 Degree Internal Elbow.....	.35
2135	45 " Flat.....	.27
2156	90 " Box Connector.....	.34
2159	Wire Toggle Fastener.....	.03
2161	Strap Fastener.....	.03
2181	Connector Ovalduct to Oval Knockout.....	.10
2662	Outlet Box 4 x $\frac{3}{4}$.....	.21
2663	Extension Ring for Boxes.....	.20
2665	Outlet Box 4 x $\frac{3}{4}$ with Fixture Stud.....	.28
2862	" " $3\frac{1}{2}$ x $\frac{3}{4}$.....	.20
2865	" " $3\frac{1}{2}$ x $\frac{3}{4}$ with Fixture Stud.....	.27
4170-S1	Sectional Switch Box 4 x $1\frac{1}{4}$ x 1.....	.38
4172-S1	Spacer for above box.....	.34

MOLDING, WIREMOLD

MOLDING

No. 500 2-Wire, price per ft.	\$.10
" 700 6-Wire, " " "	.12
Master Size, " " "	.25

FITTINGS

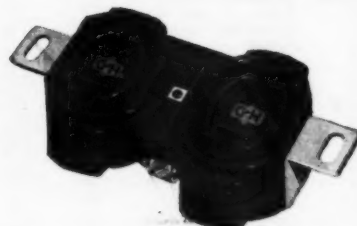
	For No. 500 2 Wire Size	For No. 700 4 Wire Size	For Master Size
	No. Price	No. Price	No. Price
Coupling.....	501 .04	5701 .04	1001 .04
Bushing.....	502 .04	5702 .04	1002 .04
Supporting Clip.....	503 .06	5703 .06	1005 .06
Connecting Strap.....	504 .04	704 .04	1005 .06
Connecting Cover.....	506 .04	706 .04	1005 .06
Ground Coupling or Clamp.....	509 .12	5709 .12	1009 .20
90 Degree Flat Elbow.....	511 .22	5711 .22	1011 .45
45 ".....	512 .22	5712 .22	.....
Tee Plain.....	515 .36	5715 .36	.....
Crass Plain.....	516 .37	.....	.....
Internal Elbow.....	517 .26	5717 .26	1017 .45
Elbow Pull Box.....	.....	5717A .50	.....
External Elbow.....	518 .22	5718 .22	1018 .40
Corner Box.....	519 .37	5719 .45	.....
Narrow Fitting.....	.....	5720 .55	.....
Show Case Fitting.....	.....	5720A .45	.....
One Piece Rosette.....	521 .36	5721 .36	.....
Two Piece Rosette and Block.....	522 .50	.....	.....
Fixture Rosette, 1/4".....	523 .70	.....	.....
" 3/4".....	524 .65	5724 .65	.....
Receptacle Base.....	525 .70	5725 .70	.....
Keyless Receptacle.....	526 .90	5726 .90	.....
Attachment Plug.....	527 .90	5727 .95	.....
Utility Box.....	.....	5728-29 .36	.....
Contact Block.....	30	5730 .30	.....
Blank Cover.....	531 .14	5731 .14	.....
Outlet Box, 2 1/2".....	532 .45	5732 .45	.....
" 3".....	533 .45	5733 .45	.....
Closed Extension Box.....	.....	5734 .65	.....
Distribution Box.....	.....	5735 .70	1035 1.00
Blank Cover.....	536 .16	5736 .16	.....
Extension Box, 4 1/4".....	537 .65	5737 .65	.....
Fixture Box, 4 1/4".....	538 .65	5738 .65	.....
" 6 1/4".....	.....	5739 & A .85	.....
Combination Box.....	.....	5745 .70	.....
Switch or Recep. Box, Single.....	.....	5747 .80	.....
" " " 2 Gang.....	.....	5747-2 1.00	.....
" " " 3 Gang.....	.....	5747-3 1.15	.....
Surface Box, Single.....	.....	5748 .90	.....
" " " 2 Gang.....	.....	5748-2 1.20	.....
" " " 3 Gang.....	.....	5748-3 1.25	.....
Push Switch Box.....	549 1.00	5749 1.00	.....
" " " Shallow.....	550 1.05	5750 1.05	.....
Adaptor Plate and Cover, Single.....	551 .70	5751 .70	.....
" " " 2 Gang.....	552 1.25	5752 1.25	.....
" " " 3 Gang.....	553 1.35	5753 1.35	.....

The Best Selling



▲
The switch mechanism of the C-H Porcelain Socket is strong and positive. The construction throughout is rugged to withstand years of service. A single assembly screw saves time in wiring and interchange of caps and bases is possible. Made in the key, keyless, push-button and pull-chain types. Approved by the Underwriters.
▼

▲
Because it doubles the number of outlets, at only a slight increase in cost, the C-H Duplex Receptacle is the simplest answer to the demand for more outlets. Large binding posts, shallow construction, make installation easy. Approved by the Underwriters.
▼



• SELL • COMPLETE • CONVENIENCE •

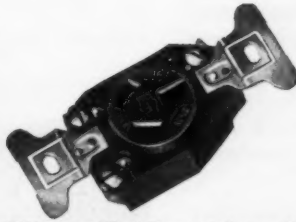
Product you have Your Experience!

*Make your knowledge of wiring sell
more wiring devices—secure new
jobs—build reputation*

YOUR specialized wiring experience is the most valuable asset you have. By investing it properly you can collect dividends on the long hours and hard effort you have spent through the years to acquire it.

Go to the builder—architect—owner or realtor—and offer your service. Your experience is the best guide they can get to insure the job will be adequately wired, not only for the present but to anticipate electrical developments of the years to come.

Service of this kind builds good will and establishes you as wiring head-



C-H 3-wire Flush Receptacles are in keeping with the latest trend in wiring. The base is made of unbreakable, heat-proof Thermoplas—the clips of heavy phosphor bronze assuring positive contact and long life. The staked binding screws never loosen—and are large in size for strength and wiring convenience. C-H 3-wire Flush Receptacles meet Underwriters' requirements.

quarters in your community. By insisting on complete wiring you enable the builder to have a more salable building—and at the same time secure more profit for yourself.

To protect good will thus built up, insist on C-H Wiring Devices. Cutler-Hammer offers a complete line with a device for every wiring need. A

quarter century of unquestioned reputation is behind C-H Devices, assuring their quality—their long life of satisfaction.

The latest C-H Catalog describes the complete line. Write for it; your jobber will stock you with C-H Devices.

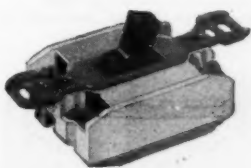
CUTLER-HAMMER, Inc.

Pioneer Manufacturers of Electrical Apparatus

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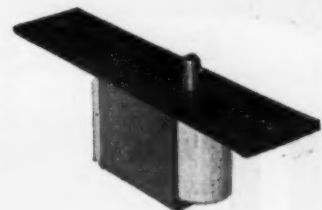
CUTLER HAMMER

MODERN WIRING  NECESSITIES



C-H Flush Switches of the Toggle Type are constantly growing in popularity because of their beauty, convenience and quality. Built shallow—they are convenient to install in any standard box. Made in single-pole, double-pole and 3-way types. Approved by the Underwriters.

C-H Automatic Door Switch can be installed in any door jamb. Light is turned on automatically when the door is opened. Especially convenient for lighting closets. Designed to fit in any type of box and to use any type of wire including "Romex." Approved by the Underwriters.



♦ ♦ ♦ ♦ ♦ BUILD ♦ GOOD ♦ WILL ♦ ♦ ♦ ♦ ♦

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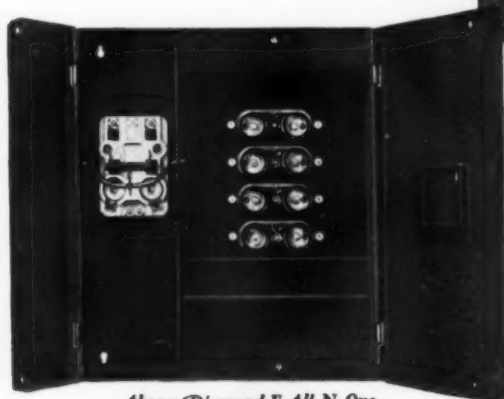
Extra Safety Extra Service in Diamond E X-O Switches

COVERS can be locked in closed position to prevent unauthorized re-fusing or tampering and in "on" or "off" position to prevent operation at times to cause damage to machinery or to endanger workmen. Ingenious quick break mechanism reduces possibility of spring breakage to a minimum. Should break ever occur, it cannot come in contact with current-carrying parts or alter operation of the switch. Cadmium plated current-carrying switch parts. Provides extremely low contact resistance. In laboratory tests, Diamond E X-O Switches will carry 100% overload without excessive heating.

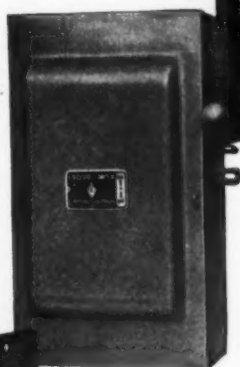
Code gauge steel cabinets assure ample protection for working parts. Finished with baked enamel which provides a high gloss black, pleasing in appearance and hard and resistant to scratches.

Other Advantages

Designed for either surface or semi-flush mounting. - Diamond E concentric knockouts...no cutting or reaming necessary. - Ample wiring space...even for largest sizes. - Switch jaws fitted for perfect contact. Operating arm is cold rolled, flawless steel. Shipped in individual cartons...guaranteeing first class condition when ready to use.



Above: Diamond E All-N-One Combination Entrance Switch and Cut-Out Cabinet.



Above: 250 volt, Solid Neutral X-O Switch, open and closed views.



Diamond E Industrial Switches in the modern plant of the Los Angeles Rubber Stamp Company

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Diamond E Wiring Gutter. Knockouts can be used in many different combinations. An exclusive feature. Saves many hours of labor.

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Albert Steinfeld & Company

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Waco Electrical Supply Co.

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Wheeling, W. Va.

The Front Co.

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Nunn Electric Co.

Wilkes-Barre, Pa.

Bunnell-Stevens Company, Inc.

Winston-Salem, N. C.

Lambeth Electric Supply Co.

Worcester, Mass.

Sager Electrical Supply Co.

Youngstown, Ohio

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THE EMERSON ELECTRIC MFG. CO.

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EMERSON

FANS . . .

For No. 500		For No. 700		For No. 500	
2 Wire Size		4 Wire Size		Master Size	
No.	Price	No.	Price	No.	Price

	No.	Price	No.	Price	No.	Price
Box Connector.....	581	34	5781 & A	34		
Conduit Coupling.....	582	38	5782 & A	38		
Elbow Box Connector, 1/2" Male.....	583	38	5783	38		
Conduit Elbow, 1/2" Female.....	584	38	5784	38		
Combination Connector.....	585	25	5785	25		
Offset Connector.....			5786	40	1086	85
Openwork Coupling.....	588	36	5788	40		
Kick Plate.....					1087	34

PIPE NIPPLES

Galvanized Wrought Iron

		Size of Nipples and Price Each							
Length		Size 3/4"	Size 3/4 & 3/4"	Size 1 3/4"	Size 1 3/4"	Size 1"	Size 1 1/4"	Size 1 3/4"	Size 2"
Close Nipples...		\$.06	\$.06	\$.06	\$.07	\$.10	\$.14	\$.17	\$.20
2 1/4" to 3 1/4" Long		.10	.10	.10					
3 1/4" to 4 1/4" "					.12	.15			
4 1/4" Long.....								.28	.35
5" "		.12	.12	.14	.14	.20	.24	.30	.38
6" "		.14	.15	.15	.17	.22	.28	.34	.40
7" "		.18	.18	.18	.21	.27	.34	.40	.55
8" "		.20	.20	.21	.23	.30	.37	.45	.60
9" "		.21	.21	.22	.25	.33	.40	.50	.67
10" "		.23	.23	.24	.27	.37	.40	.56	.75

NOTE—Above prices are for ordinary galvanized pipe nipples as used by plumbers and steam fitters. If nipples have to be made up from conduit charge the foot price of conduit plus regular labor charge.

CHASE NIPPLES & COUPLINGS

Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Chase Nipples...each	\$.10	\$.10	\$.10	\$.15	\$.25	\$.30	\$.34	\$.48	\$.78	\$ 1.20
* Couplings *	.12	.12	.12	.14	.....	.....	.....	.....	.....	.....

For Erickson Couplings, see Page PL-8.

CHASE MALE REDUCERS

CHASE FEMALE ENLARGERS

1 $\frac{3}{4}$ " to 1 $\frac{1}{2}$ " Reducers, each.....	\$.15	1 $\frac{1}{4}$ " to 1 $\frac{3}{4}$ " Enlargers, each.....	\$.15
1 $\frac{1}{2}$ " to 1 $\frac{3}{4}$ " " " " " " " " " " "	.20	1 $\frac{3}{4}$ " to 1 $\frac{1}{2}$ " " " " " " " " " "	.20
1 $\frac{3}{4}$ " to 1 $\frac{1}{2}$ " " " " " " " " " "	.40	1 $\frac{1}{2}$ " to 1 $\frac{1}{4}$ " " " " " " " " " "	.30
		1 $\frac{1}{4}$ " to 1 $\frac{1}{8}$ " " " " " " " " " "	.50

NAILS

Insulated

Millonite Insulated Nails, per dozen.....	\$.05
Leather Nail Heads, " " .....	.05
Staples Insulated, " " .....	.05

PLUGS, ATTACHMENT

ATTACHMENT PLUGS COMPLETE

	Price
Competition Plug.....	\$.10
Pony Composition.....	.15
Standard " 1 1/2" Hole.....	.25
" " 3/4" ".....	.25
Bakelite " Back or Brown.....	.35
" " Green.....	.40
" " Fawn or Grey.....	.50
Double T Slot Parallel Porcelain.....	.45
" " Composition.....	.55
Paraline Convertible.....	.45
Steel Covered Cap & Standard Base.....	.30
Brass " ".....	.55
Cord Grip " ".....	.40
" " Steel Covered Cap & Standard Base.....	.45
Polarized Standard Plug complete.....	.30
" " Heavy Duty Plug with Brass Cap.....	1.25
" " 3 Wire Heavy Duty Plug with Composition Cap.....	.90
One Piece Attachment Plug Composition.....	.35
" " Benjamin 903.....	.20

CAPS ONLY

For Attachment Plugs

Attachment Page		
Parallel Pony Cap Composition.....		\$.10
Standard Cap Composition.....		.10
" Metal Covered Composition.....		.20
" " with Cord Grip.....		.30
" Knostrain Composition.....	Met. Cov. Composition.....	.50
" " Brass Covered.....		.40
" Bakelite Black or Brown.....		.90
Polarized Standard.....		.15
" " Brass Covered.....		.40
Tandem Blades Standard.....		.25
" " Steel Covered.....		.50
" " " with Cord Grip.....		.30
" " Steel Covered with Cord Grip.....		.50
" " Knostrain Composition.....		.55
" " " Brass Covered Composition.....		.95

Reynolite Han-D-Cap No. 470—\$.30 No. 480—\$.35.
Note for other caps see Page PL-17.

BODIES ONLY

For Attachment Plugs

Pony Composition Body only.....	\$.10
Standard ".....	.13
Bakelite " Black or Brown.....	.20
" Red-Green-Orange.....	.25
Heavy Duty Polarized Porcelain.....	.45
3 Wire.....	.50

Flasher Plugs

Diamond Flasher Button.....	\$.60
Speedoodle Flasher Plug 60 Watts—\$1.50. 100 Watts.....	2.00

PLUGS, APPLIANCE

Make	Number & Description	Price Each
American Beauty	803 Plug Complete for Small Irons	.60
	806 " " " Large Irons	1.35
	807 " " " Toasters & Stoves	.25
Arrow	6510 " " " with Switch	.85
Beaver	See Gripall & Suitzall.	
Bryant	668 Plug Complete with Switch	.85
	752 " " " Shorter than 668	.65
Cutler-Hammer	7051 Plug Complete with Switch	.85
Dover	13 Up Connector Plug for 3½ & 6 lb. Irons	.50
	13 Switch Plug Complete	1.00
Fitsall (Rodale)	P-21 Competitive Plug, no Switch	.20
Gripall (Beaver)	F1 Super Type Adjustable Contacts	.45
	F4 " " Nickel Alloy	.55
	F5 " " Armored Casing	.55
	F6 " " Nick. Alloy Contacts	.60
	G1 Gripall Switch Plug with Switch	.90
	G21 " " Competitive Type with Switch	.45
Hemco	250 Heater Plug, no Switch	.55
Hotpoint	CD6P1 Iron Plug	.45
	CD69P1 " " Armored	.60
	CD79P1 " " with Switch	1.00
Hubbell	7020 Appliance Switch Plug	.90
Kool-Pull (Colta)	Appliance Plug, no Switch	.75
	" " with Switch	1.00
Liberty	932 Heater Plug	.35
Pluggal	9 Appliance Plug with Spring	.30
	700 " " Switch	.85
Propp	5—One 4 All Appliance Plug, no Switch	.35
	55 Standard Iron Plug, no Switch	.25
	56 Armored	.55
	52 Iron Plug with Switch	.55
P & S	1550 Appliance Switch or Pendant	.90
Reynolite	500 Reynolite Connector Plug, no Switch	.50
	510 " " with Switch	.85
Rodale	P-67 Quality Iron Plug, no Switch	.25
	P-23 Armored	.40
	P-29 " " Bronze Contacts	.30
	P-15 Iron Plug with Switch	.60
	800 Armored Plug with Toggle Switch	.90
Security	151 Security Appliance Plug, no Switch	.40
Simplex	890 Armored Appliance Plug, no Switch	1.00
Suitzall (Beaver)	F2 Heater Plug Contact Clips	.25
	F22 " " Regular Binding Screws	.25
Sunbeam	Heater Plug	1.50
Torrid	503 & 505 Appliance Plug, Variable Heat Con	2.00
Utillo	1500 Utillo Appliance Plug, no Switch	.20
Westinghouse	299423 Plug Complete, no Switch	.75
	373656 " " with Switch	1.00
White Cross	White Cross Heater Plug, no Switch	.50
	" " with Switch	.90

PANEL BOARDS

BULLDOG FUSINTERS

Small Residence Type

No.	Description	2	4	6	8	12
		Circt.	Circt.	Circt.	Circt.	Circt.
BF	Flush Type —Luminized.....	\$2.50	\$3.75	\$5.40	\$8.80	\$11.80
BBF	—Black.....	2.00	2.80	4.75	.....	.....
BBS	Surface Type—Black with Embossed Fronts.....	2.00	2.75	4.75	8.30	12.05
CBS	" " —Black—Flat Cover with Inside Shield.....	1.85	2.35	3.90	7.15	10.40
BOS	" " —Black—Flat Cover with- out Shield.....	1.70	2.15	3.75	.....	.....
BSF	Flush Type —Luminized with Toggle Switch Plate.....	.....	6.65	10.00	15.00	20.00
BSF	" " —With 30 Amp. Safto Fuse.....	.....	20.60	22.00	.....	.....
BSF	" " —With 60 Amp. Safto Fuse.....	.....	21.75	22.45	.....	.....
BKF	" " —Fusenter & Pull Box.....	.....	6.65	10.00	15.00	20.00
COMBINATION	—“Safto Fuse” Switch & Cutout—30 Amp. or 60 Amp. Size. Flush Type—\$7.50. Surface Type—\$6.50.	.....	.....	.....	.....	.....
All Other Types	—For Resale Prices on all other Bulldog Fusenters use Manu- facturers' list prices, less 17%.	.....	.....	.....	.....	.....

TRUMBULL—CIRCLE T

Residence Panel Boards

Number	Description	4 Circ.	6 Circ.	8 Circ.	10 Circ.	12 Circ.
3104	Single Fusing 2 Wire Mains, 3					
3212	Wire Branches.....	\$2.85	\$ 4.80	\$ 9.75	\$11.30	\$13.00
3404	Double Fusing 2 Wire Mains, 3					
3412	Wire Branches.....	9.15	12.45	18.25	23.25	26.60

TRUMBULL-VANDERPOEL

	2	3	4	6	8	12
Black or Aluminum Flush.....	\$1.80	.....	\$2.70	\$4.90	\$8.55	\$13.05

WESTINGHOUSE						
Junior Residence Type						
Number of Circuits	2	3	4	6	10	12
Gray Trim & Galv. Box						
Flush No. 64012 to 64021.	\$1.75	\$2.25	\$2.50	\$4.50	\$ 6.60	\$ 7.85
Gray Trim & Galv. Box						
Surface No. 64052 to 64061	1.75	2.25	2.50	4.50	6.60	7.85
Toggle Sw. Flush Type						
No. 64034 to 64042.	6.60	10.00	13.20	16.50	19.80	

P-SUNDRIES

RUNNING THREAD, PIPE

Price per Foot	$\frac{1}{4}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{1}{2}$ "
	\$.25	\$.30	\$.35	\$.45

SOLDERING PASTE

(Also on Page PL-25.)

Make	2 Oz. Cans	2 Oz. Tubes	4 Oz. Cans	Half Pound Cans	One Pound Cans
Allen	\$.30	\$.40	\$.55	\$.90	\$1.45
Burnley	.20		.30	.40	.70
Crescent	.25		.35	.55	.85
G. E.	.20			.75	1.30
Highland	.30				1.40
Nokorode	.20			.75	1.30

PAINT & VARNISH

Insulating

Make	Per Pint	Per Quart	Per Half Gallon	Per Gallon
Armaltac	\$.55	\$1.00	\$1.75	\$3.00
Ajax Varnish No. 25	.40	.75	1.35	2.20
Enamelac	.40	.75	1.35	2.20
G. P. Black or Clear	.45	.80	1.45	2.60
Lustorac	.40	.75	1.35	2.20
Voltoac Quick Drying	.40	.75	1.35	2.20
W. P. Black Insulating	.40	.75	1.35	2.20
P. & B. No. 2 Paint	.55	1.00	1.75	3.00
Pothead Compound, per Pound				\$.55
For Pipe Straps, see Page PL-25. For Solder, Sticks, etc., Page PL-25.				

PLATES & PLUGS, RECEPTACLE

PLATES

For Flush Receptacles

	Brass	.040 Thick Sprayed B. Brass	.060 Thick Sprayed B. Brass
Stand. Recep. Plate Single or Duplex	\$.15	\$.20	\$.30
“ Lift. Cover Pl. Single or Duplex		.40	.45
“ Lift. Cov. 2 Gang Single or Duplex		.65	.75
Disappearing Door Plate Single		.70	.70
“ Duplex			1.10

SUNDRY PLATES

For Receptacles

Brass Combination Plate-1 Switch-1 Recep. or Duplex .040 Brass	\$.60
“ “ “ “ “ “ .060 “	.75
“ “ “ “ “ “ .060 “	1.00
Bakelite or Composition Plate Single or Duplex Each	.20
2 Gang Combination Plate Each	.40
Guth Porcelain Plate for Single or Duplex Receptacle	.30
Mirror Glass Single Plate \$2.00—Duplex \$3.00—3 Gang	4.00
Bryant Wood Inlaid One Gang For Single or Duplex Receptacle	2.25
De Luxe All Metal	.85
Hubbell Bakelite Screwless Plate	.50
“ Brass Single Plate for 10 & 20 Amp. Recep. #5548	.30
“ 30 Amp. Receptacle 7072 & 7114	1.35

CAPS OR PLUGS

For Receptacles

Standard Types	Price
Pony Parallel Blades Composition	\$.10
Standard	.10
Standard Bakelite Parallel Blades Composition	.20
Tandem	.25

SPECIAL PLUGS & CAPS, BRASS COVERED—CORD GRIP ETC.

Disappearing Door Plug Composition	\$.65
“ Brass Covered	1.00
Parallel Blades Brass Covered	.40
“ Cord Grip Composition	.30
“ “ Steel Covered	.50
“ “ Knostrain Composition	.40
“ Brass Covered	.90
Polarized Blades Standard Composition	.15
“ Brass Covered	.40
“ Cord Grip	.50
“ 20 Amp.	.90
“ 30 “	.50
“ 10 “ 3 Wire Composition	.50
“ 10 “ “ Brass Covered	.55
“ 20 “ “	1.00
“ 30 “ 2 “ Black Porc.	1.75
Tandem Blades Std. Composition	.25
“ Brass Covered	.40
“ Cord Grip Brass Covered	.50
“ “ Knostrain Composition	.55
“ Brass Covered	.95

RECEPTACLES, FLUSH

STANDARD RECEPTACLES OR CONVENIENCE OUTLETS

	Without Plates	Plates Extra	Price
Shallow Comp. Side Wired Single			\$.25
“ “ “ “ Duplex			.35
“ Porc. “ “ Single			.25
“ “ “ “ Duplex			.35
Deep Comp. Top “ Single			.45
“ “ “ “ Duplex			.65
“ Porc. “ “ Single			.45
“ “ “ “ Duplex			.65

SUNDRY RECEPTACLES

Plates Extra Except Where Marked “X”

For Lift Cover Plate Single	\$.50
“ Duplex	.80
X With Rd. Met. Cvr. For $3\frac{1}{4}$ Box Single	.35
“ “ “ “ “ Duplex	.60
“ “ “ “ “ 4 “ Single	.40
“ “ “ “ “ “ Duplex	.55
X With Rd. Brass Plate Small Single	1.15
“ Large	1.25
Edison Screw Base Recep. Single	.25
Disappearing Door Recep. Single	.75
“ Duplex	1.10
Screwless Plate Recep. Single	.30
“ Duplex	.45
10 Amp. Polariz. For 2 Wire Single	.65
20 “ “ “ “ “	1.30
30 “ “ “ “ “	2.75
10 “ “ “ “ “	1.45
20 “ “ “ “ “	1.60
30 “ “ “ “ “	4.35

RECEPTACLE COMBINATIONS

With Plates

Bryant Numbers or Equal

2957-2979 One Flush Recep. One Tumb. Switch Tempus or Brass Plate	\$2.00
2967-2989 One Comp. Recep. One Tumb. Switch Tempus or Brass Plate	2.10
117 “ Porc. Flush Recep. One Ind. Switch-.060 Brass Plate	2.20
121 “ “ “ “ “ One Pilot light .060 Brass Plate	2.60
514 “ Disap. Door Rec. One Bulls Eye Solid Plate	4.60
518 “ “ “ “ “ Flush Switch-Bulls Eye Solid Pl.	7.35
467 “ Flush Recep. One Flush Switch Bulls Eye Solid Plate	5.75
763 Duplex Flush Recep. Bulls Eye Solid Plate	3.75
558 “ Push Switch Bulls Eye Solid Plate	6.30
427 Bulls Eye Receptacle & Lamp no plate	1.25
Hubbell Switch Tap Combination #7163 & 7164 without Plate	2.15

RECEPTACLES, PORCELAIN

PULL TYPE FOR FIXTURES

Keyless & Pull Chain for Lighting

Univ. No.	G. E. No.	Type	Price
994	2288	8' Insulated Chain and 6 Feet Cord	\$.70
995	2292	8' Chain	.60
996	2289	6 Feet of Cord	.60
997	2293	8 Inches of Insulated Chain	.60
998	2287	Short Chain—6 Feet of Cord	.60
999	....	3 Feet of Chain	.75

ALL WHITE PORCELAIN RECEPTACLES

For Ceilings or Walls

No.	(Arrow—Hubbell or P & S or Similar)	Price
860	For $3\frac{1}{4}$ " & 4" Box with Shade Hldr. Groove	\$1.00
881	“ “ “ “ “ 2 $\frac{1}{4}$ " Shade Holder	1.40
1381	“ “ “ “ “ 3 $\frac{1}{4}$ " “	1.70
1451	“ “ “ “ “ 4" “	1.75
951	“ “ “ “ “ Porc. Ring No S. H.	1.10
960	“ “ “ “ “ Box only with 2 $\frac{1}{4}$ " Shade Holder	1.25
921	“ “ “ “ “ with Porc. Ring No S. Holder	1.00
871	“ B. X. Box with 2 $\frac{1}{4}$ " Shade Holder	1.55
1371	“ “ “ “ “ 3 $\frac{1}{4}$ " “	1.85
1471	“ “ “ “ “ 4" “	1.75
971	“ “ “ “ “ Porc. Ring-No S. Holder	1.25
829	For $3\frac{1}{4}$ " or 4" Box with Shade Hldr. Groove	1.95
849	“ “ “ “ “ 2 $\frac{1}{4}$ " Shade Holder	2.40
1449	“ “ “ “ “ 3 $\frac{1}{4}$ " “	2.60
949	“ “ “ “ “ 4" “	2.65
929	“ “ “ “ “ Porc. Ring No S. Holder	2.05
919	“ 3 $\frac{1}{4}$ " Box only with 2 $\frac{1}{4}$ " Shade Holder	2.20
869	“ “ “ “ “ Porc. Ring No S. Holder	1.90
1369	“ B. X. Box with 2 $\frac{1}{4}$ " Shade Holder	2.55
1469	“ “ “ “ “ 3 $\frac{1}{4}$ " “	2.85
969	“ “ “ “ “ Porc. Ring No S. Holder	2.65
830	For $3\frac{1}{4}$ " & 4" Box with Shade Hldr. Groove	1.95
850	“ “ “ “ “ 2 $\frac{1}{4}$ " Shade Holder	2.40
1350	“ “ “ “ “ 3 $\frac{1}{4}$ " “	2.65
1450	“ “ “ “ “ 4" “	2.70
950	“ “ “ “ “ Porc. Ring-No S. Holder	2.05
930	“ 3 $\frac{1}{4}$ " Box only with 2 $\frac{1}{4}$ " Shade Holder	2.15
920	“ “ “ “ “ Porc. Ring-No S. Holder	1.90
870	“ B. X. Box with 2 $\frac{1}{4}$ " Shade Holder	2.55
1370	“ “ “ “ “ 3 $\frac{1}{4}$ " “	2.85
1470	“ “ “ “ “ 4" “	2.85
970	“ “ “ “ “ Porc. Ring-No S. Holder	2.15

RECEPTACLES, SURFACE

SURFACE RECEPTACLES—STANDARD

Edison Base				Universal Number	Price
Description	All Keyless	No S. H. Groove			
Pony Cleat Receptacle Side Screws				50715	\$.18
Standard Cleat	Round Center			9171	.20
	Side			9402	.30
Oblong		With		4013	.40
Concealed	Round Base			58300	.55
		With Removable Ring		4001	.55
Oblong Receptacle for Wood Molding with S. H. Groove				50744	.65
Mogul P & S 520—Arrow 5012 or Hubbell 3464				4026	.85
Miniature or Candelabra Small Type				9445-6	.20
Extended				366-7	.25

T-SLOT SURFACE RECEPTACLES

Without Caps				Price
Description	10 Amp.			
Small T Slot Concealed Recept.				\$.50
For Wood Molding				.50
Conduit Fittings				.55
Outlet Box				.50
Polarized Cleat				.60
Concealed				.60
Wood Molding				.65
3 Wire With Cap				1.15
Cleat No Cap				.75
Concealed No Cap				.80
Wood Molding No Cap				2.00
3 Wire Conc. With Cap				.45
All Porcelain for 3 1/4" Box Single				.55
" " " 4" " Duplex				.60
" " " 4" " Single				.70

BOX & SIGN RECEPTACLES

Edison Base				Price
Description				
Shallow Sign Recept. Screw Term.				\$.30
Concealed Term.				.35
6 Concealed Wire Term.				.40
with S. H. Groove				.35
Deep				.30
Screw Term.				.30
Concealed Term.				.40
6 Concealed Wire Term.				.20
One Piece				.25
Recept. With Plate for 3 1/4" Box				.30
" " " 4" " Weathpl.				.30
" " " 4" " Weathpl.				.35
All Porcelain for 3 1/4" Box				.40
Brass Covered for 3 1/4" & 4" Box				1.00
Pull for 3 1/4" & 4" Box				2.00

R-SUNDRIES

STANDARD ROSETTES
Porcelain

				Price
Description				
Cleat—1 Piece Junior Fuseless Rosette				\$.15
" " " 2" " Fusible				.20
Concealed—2 Piece Concealed Fuseless Rosette				.35
" " " 2" " Fusible				.20
" " " 2" " For Wood Moulding—Fuseless				.35
" " " 2" " Fusible				.20
Box Type—1 Piece Rosette for 3 1/4" Box—Fuseless				.40
" " " 1" " Brass Covered for Boxes				.50
For Special Conduit Rosettes—See Pages PL-10, 11 and 12.				1.20

GROUND RODS

Galvanized, not Copperweld

Size	Not Wired Price	Wired Price
3/4x5 Feet Each	\$.35	
3/4x6 " "	.40	
3/4x5 " "	.55	\$.70
3/4x6 " "	.60	.75
3/4x7 " "	.70	
3/4x6 " "	.85	1.00
3/4x7 " "	1.00	
3/4x8 " "	1.15	
1x8 " "	2.70	3.20

RAWLPLUGS

Standard Types

Number of Rawlplug	Drill Hole	For Screw No.	Price Each Any Length
#8	1/8"	6-7	\$.02
8	3/16"	8-9	.03
10	1/4"	10-11	.04
12	5/16"	12	.05
14	3/8"	14	.06
16	7/16"	16-18	.08
20	1"	20-22	.12

Rawlplugs for Lag Screws

Size of Lag Screw	Size Drill Hole	Size of Rawlplug	Price Each Length
1/2"	1/4"	1 1/4"	\$.13
3/4"	3/8"	2"	.15
1"	1/2"	3"	.18
1 1/4"	5/8"	3 1/2"	.20
1 1/2"	3/4"		.23
2"	1"		.27
2 1/2"	1 1/8"		.30
3"	1 1/4"		.30

NOTE: For Expansion Shields—See Page PL-10.

SOCKETS

STANDARD SOCKETS

Complete Sockets				Caps Only				Body Only
Pendnt	Cap	Cap	Cap	Pendnt	Cap	Cap	Cap	
Brass Shell Standard Key	.30	.30	.40	.50	.10	.10	.20	.25
" " " Keyless	.25	.25	.35	.45				.20
" " " Pull	.40	.40	.50	.60				.35
" " " Push	.30	.30	.40	.50				.25
Electrolite Same as Above								
Lock Type (Brass) Key	1.00	1.00	1.10	1.20	.10	.10	.20	.95
" " " Keyless	.95	.95	1.05	1.15				.90
" " " Pull	1.15	1.15	1.25	1.35				1.05
" " " Push	1.00	1.00	1.10	1.20				.95
Porcelain Key	.55	.65	.70	.90	.15	.30	.35	.40
" " " Keyless	.50	.60	.65	.85				.35
" " " Pull	1.00	1.15	1.20	1.40				.90
" " " Push	.75	.80	.95	1.10				.60
Levolier Pull Socket	.40	.40	.50	.60				

BASES FOR SOCKETS

For Brass Shell Sockets

Description	Price
Small Concealed Base	\$.35
" " " Brass Covered Base	.50
3 1/4" Box Base Brass Covered	.70
" " " 4" " " "	1.00
Cleat Base for Open Wiring	.40
Wood Molding Base	.35
Angle Base	.40

For All Porcelain Sockets

Description	Price
All Porcelain Cleat Base	\$.25
" " " Concealed Base	.30
" " " For Wood Molding	.30
" " " 3 1/4" Box Base	.45
" " " 4" " " "	.60

BAYONET SOCKETS

Sometimes Called Wall Sockets or Receptacles

Keyless Brass Shell with Small Conc. or Slotted Base	50717 & 18	\$.40
" " " Large	80019	.65
" " " Small Concealed Base	60020	.90
" " " with Removable Ring	9184	.65
" " " " "	60018	.65
" " " " "	50747	.65

WEATHERPROOF SOCKETS

Standard Weatherproof Pigtail molded or Porcelain	\$.25
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CANDLE SOCKETS

Any Make

Keyless Candle Socket with Tube & Solid Open or Adjust. Hickey	\$.25
Tumbler Type Candle Socket with Tube & Solid Open or Adjust. Hickey	.50
Pull Chain Candle Socket with Tube & Solid Open or Adjust. Hickey	.65

CANDELABRA OR MINIATURE SOCKETS

Keyless Porcelain with Male Thread	\$.35
" " " Female	.35
Brass Shell 1/4" Cap	.55
Key Pull	.65
" " " 1/2" " "	1.35

DIM-A-LITE & LO-LITE SOCKETS

Dim-a-lite #23	\$1.00
" " " 33	1.25
" " " 34	1.25
Lo-Lite	1.50

SOCKET ACCESSORIES

Adaptors for Sockets—See Pages PL-4 and 18.	
Acorn Hubbell 5919-6982-7004—or Similar—Each	\$.10
Acorn Luminous Hubbell 7015 Bryant 750 GE 860—or Similar—Each	.30
Bushings Hard Rubber 1/4" Each .01c—1/2" Each	.02
Chain for Pull Sockets—Per Foot	.10
Cord for Devices—Light Type—Per Foot	.02
Cord for Devices—Heavy Type—Per Foot	.04
Handles for Sockets—Bryant 1240-1388—or Similar	.25
Splicing Links Non-Insulating for Chain—Each	.05
Splicing Links Insulated for Chain—Each	.15

Handles—Standard Type Each \$.12—Ratchet Type.....	\$.18
Bases—Porcelain 5 Amp. \$.12—10 Amp. \$.15—20 Amp.....	.30
Covers—10 Amp & Under Metal \$.15—Porcelain.....	.20
Over 10 Amp. ".....	.30

**SWITCHES, PULL CORD, CHAIN,
CANOPY, LEVOLIER, ETC.**

PULL CORD SWITCHES
Complete With 1/8 Cap, Small Socket Type

	Price
Ceiling—Bottom Pull Complete.	\$1.00
Wall—Side Pull	1.00
Rosette—Side Pull	1.00
Fixture—Bottom Pull	1.25
Deduct for Base only without $\frac{1}{4}$ Brass Cap.	.10
Add for $\frac{1}{4}$ Brass Cap on any of above Switches.	.20
" " Small Concealed Base of above Switches.	.20
" " Cleat	.30
" " Base to Fit $3\frac{1}{4}$ Box of above Switches.	.50
" " Wood Moulding Base of above Switches.	1.00
" " Angle Base	.25
" " " " " "	.30

HEAVY DUTY PULL CORD SWITCHES, METAL COVER
With 8 Feet Heavy Cord

S.P. with Small Porc. Slotted or Solid B.	Price
D.P. " " " " " "	\$1.65
3 Pole " " " " " "	1.85
	1.85

These switches can be furnished with side or bottom open, at same price.

TYPE "O" PULL SWITCHES

For Ceiling Fixtures or Ceiling Fans

Single or Double Pole—3 & 4 Point Electrolier & Motor Control—Similar to Bryant #2473 to 2480 with 3/4 Caps, cord & Ball Each.....\$1.90

CANOPY SWITCHES

Snap or Tumbler Canopy Switches any style any make (except below).....	Price \$.40
Pull Type P & S—3316 or 17—Arrow 340—Bryant 666.....	.95

LEVOLIER PULL SWITCHES
McGill Co.

Two-Lite Canopy or Fixture Switch #50-51-52.....	\$1.00
Link Switch #59.....	1.00
Conduit Box & Fixture Switch #61-62 & 63.....	1.00
Switch Hickey 64 & 64 A for above.....	.15

PENDANT SWITCHES

With Brass Pendant Cap

Brass Shell Pend. Cap Side Button	Price
" " " Bottom " "	\$.60
" Type "O" " " " "	.80
All Porcelain " " " "	1.90
" " " Side " "	.60
(10 Amps) " " " "	.75

FEED THROUGH SWITCHES

Nickel Feed Thru Switch.....	Price \$.50
Composition Feed Thru Switch.....	.50

DOOR SWITCHES

Door Switch without Box.....	Price \$3.50
Box Extra.....	.50

DOOR SWITCHES & OPENERS

Edwards—commonly used types

Two-Wire Commonly Used Types					Price
#0	Door Opener	Mortise Type	\$ 2.75	#152 Rim Type Flush.....	\$ 6.10
48	"	"	31.25	Arranged for Surface Conduit..	25.25
48A	"	"	34.25	154 Mortise Type.....	5.75
50	"	Rim	31.25	153 Plate Type.....	7.15
50A	"	"	34.25	174 Door Switch.....	8.65
51	"	Plate	34.25	Box for above #2000.....	1.30
51A	"	"	35.25	1541 Opener Mortise Type....	10.50
52	"	Mortise	38.25		
Latch for #52			3.55		

Partrick & Wilkins commonly used types

Mortise Type.....	\$3.50	Rim Type.....	\$6.50
-------------------	--------	---------------	--------

SWITCHES, KNIFE, ENTRANCE & PANEL

ENTRANCE & PANEL SWITCHES
30 Amp. 125 Volts, Plug Fused

Description	Location of Fuses	Price
Double Pole.....	Top	.80
" " " " " "	Bottom	.80
" " " " " " Large Size.....	Top	.85
" " " " " "	Bottom	.85
Triple " " " " " "	Top	1.20
" " " " " "	Bottom	1.20
Double Pole Single Branch.....	Top	1.30
" " " " " "	Bottom	1.30
" " " " " " Large Type.....	Top	1.45
" " " " " "	Bottom	1.45
Double Pole—Double Branch Vert. Mains.....		2.90
" " " " " " Horiz. " " " " " "		2.90
Trip. to D. P. Double Branch Vert. Mains.....		3.05
" " " " " " Horiz. Mains.....		3.05

BABY KNIFE SWITCHES

Any Make

Any Make		Porcelain Base 125 Volt		Slate Base 250 Volt	
		15 Amp.	30 Amp.	15 Amp.	30 Amp.
Single Pole	Single Throw	\$.50	\$.60	\$.55	\$.70
"	Double	.85	1.05	.95	1.25
Double	Single	.55	.70	.70	.85
"	Double	1.05	1.25	1.25	1.50
Triple	Single	1.25	1.35	1.45	1.85
"	Double	1.65	1.85	1.95	2.50

TYPE "C" KNIFE SWITCHES
Slate Base Front Connected

[illegible]

**SWITCHES, RESIDENCE, METER
SERVICE, INDUSTRIAL, ETC.**

SMALL SERVICE ENTRANCE SWITCHES

Numbers	Volts	Description	2 Pole	3 Pole
97211-97311	125	For Plug Fuse Solid Neut.	\$1.65	\$2.60
99211-99311	125	Neut. Fused	1.65	3.00
78211-78311	125	" " Meter Test.	2.55	4.05
1211	125	Porc. Entr. Switch	1.80	
97251-97351	250	Encl. Fused Solid Neut.	1.65	3.15
99251-99351	250	" " Fused Neut.	2.50	4.30

METER SERVICE SWITCHES

"Square D" Accessible Main Fuses Without End Walls

Amps.	Poles	Fused For	Neutral	Meter Test Type		Non-Meter Test Type	
				Number	Price	Number	Price
30	2	2 Plug	Fused	30211	\$ 4.00	10211	\$ 3.65
30	2	1 "	Solid	30231	3.65	10231	3.35
30	3	2 "	"	30331	4.50	10331	4.00
30	3	2 "	Unfused	30381	4.85	10381	4.80
30	2	2 Enc.	Fused	30251	4.85	10251	4.55
30	2	1 "	Solid	30271	4.20	10271	3.85
30	3	2 "	Unfused	30361	5.40	10361	5.65
30	3	2 "	Solid	30371	4.85	10371	4.55
60	2	2 "	Fused	30252	16.80	10252	15.95
60	2	1 "	Solid	30272	15.95	10272	15.05
60	3	2 "	Unfused	30362	21.65	10362	20.55
60	3	2 "	Solid	30372	17.70	10372	16.80
100	2	2 "	Fused	30253	25.60	10253	24.75
100	2	1 "	Solid	30273	25.60	10273	23.90
100	3	2 "	Unfused	30383	30.90	10383	29.35
100	3	2 "	Solid	30373	27.40	10373	25.60

METER SERVICE SWITCHES

"Square D" Main Fuses Sealed Without End Walls

Amps.		Poles	Fused For	Neutral	Meter Test Type	Price	Non-Meter Test Type	Price
30	2	2	1 Plug	Fused	362211	\$ 3.25	162211	\$ 2.85
30	2	2	"	Solid	362231	3.25	162231	2.85
80	3	2	"	"	363331	3.45	163331	3.00
30	3	2	"	Unfused	363831	3.45	163831	3.45
30	2	2	2 Enc.	Fused	362551	3.80	162551	3.40
30	2	2	"	Solid	362771	3.50	162771	3.15
80	3	2	"	Unfused	363631	4.00	163631	4.30
30	3	2	"	Solid	363771	4.00	163771	3.60
60	2	2	"	Fused	362552	15.05	162552	14.20
60	2	2	"	Solid	362772	14.15	162772	13.30
60	3	2	"	Unfused	363632	19.00	163632	17.90
60	3	2	"	Solid	363772	16.00	163772	15.05
100	2	2	"	Fused	362553	23.90	162553	23.00
100	2	2	"	Solid	362773	23.90	162773	22.10
100	3	3	"	Unfused	363833	26.50	163833	24.75
100	3	2	"	Solid	363773	25.60	163773	23.85

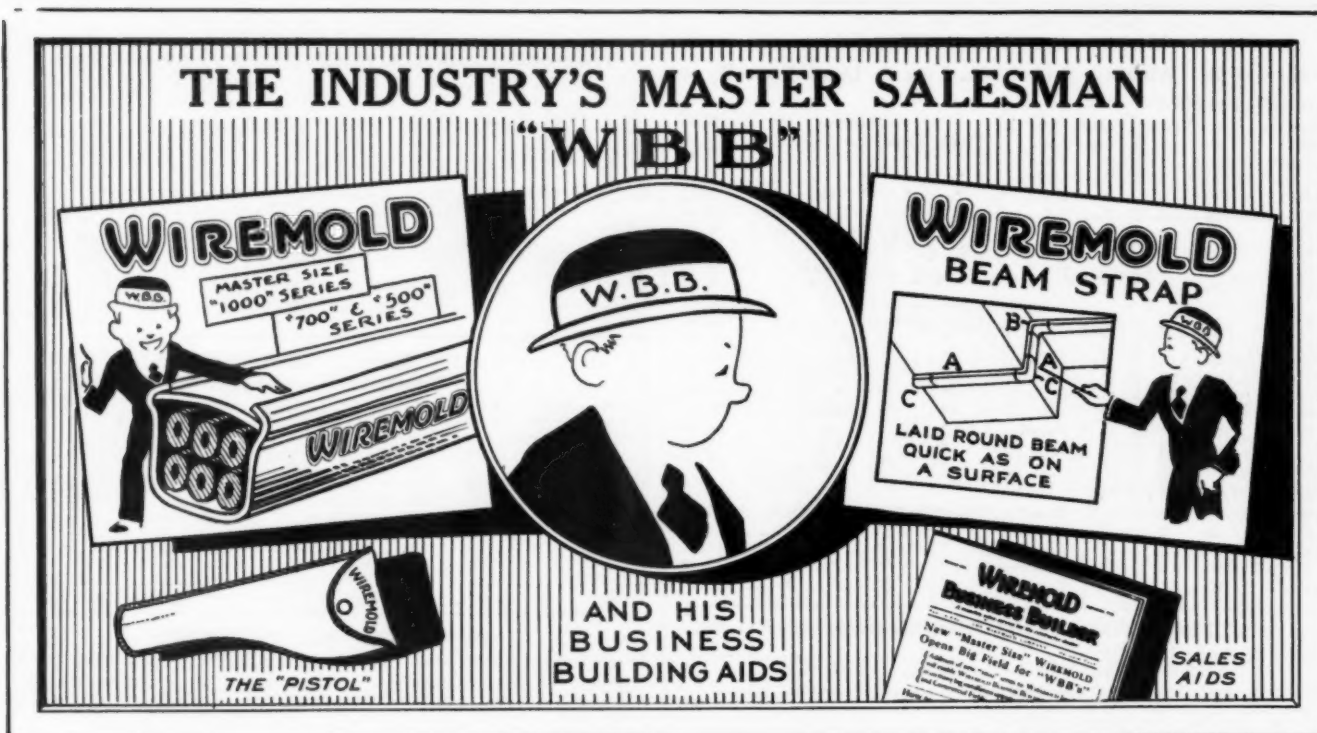
MISCELLANEOUS

	Price
Enclosed Double Branch Cutout No. 35211—30 Amp. 125 Volts.....	\$2.35
Fused Plug Receptacle..... " 5021—30 " 125 "	2.20
" Cartridge " 5001—30 " 250 "	5.60
Cabinet Porcelain Fuse Block... " 1021—30 " 125 "	1.25

UNIVERSAL METER SERVICE SWITCHES

Single Type		Ganging Type	
No. 32211 or 32311.....	\$3.45	No. 12211-13211.....	\$3.85
No. 32311.....	3.75	No. 12311.....	4.15
No. 34211.....	4.30	No. 14311.....	5.25
No. 34311.....	4.85		

All 30 Amp. 125 Volt
Single Phase & DC
without end walls



An increasingly important factor in electrical market development

How the WBB makes money for himself and helps everybody in the industry

THE electrical contractor who makes money makes it in two ways. First, he makes it by doing a good job of wiring at the least cost and a fair price, netting him a good profit.

Next, he makes money by getting more business—upon the strength of good work already done. Two kinds of business:

1. *More wiring business from the friends and acquaintances of customers pleased with wiring jobs.*
2. *Merchandise sales resulting from his contact with these pleased customers and their friends.*

Most electrical contractors find the use of Wiremold saves time and cost of installation, results in a better job of the work, pleases customers and paves the way to new business.

Hence the name "WBB"—"WIREMOLD BUSINESS BUILDER"!

Since the wiring job is the neck of the bottle through which must come all further sales of electrical merchandise and subsequent electrical service, consumption of electric current, the "WBB" therefore is a mighty factor in industry progress.

The fact that he is a "WBB" means he brings to his job and his function in the industry a kind and degree of intelligence which encourages and facilitates freer use of electrical conveniences on the part of the public.

It pays the electrical contractor to become a "WBB" because he thereby makes more money and builds more securely and permanently for the future.

And it pays every factor in the industry—jobbers, manufacturers, central stations—to promote the process because "WBB" success is all-industry success.

Copies of the WIREMOLD BUSINESS BUILDER, our monthly sales service, together with other literature descriptive of the Wiremold line and its sales possibilities, will be sent on request.

THE WIREMOLD COMPANY
HARTFORD, CONN.



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Panelboard Specialist

LOCATED at each district office and many of the branch offices of the Westinghouse Company are men specially trained in handling panelboard problems. These panelboard specialists are maintained expressly for the purpose of helping you to plan panelboard installations, and to assist you in solving knotty problems.

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Years
of knowing how

CRESCENT PRODUCTS

"Crescent" National Electric Code Rubber Covered Wire and Cable
 Intermediate Grade Rubber Covered Wire and Cable

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"Crescent" Armored Cable

"Crescent" Lead Covered Armored Cable

"Crescent" Flexible Metallic Conduit

Also Lamp, Heater, Brewery, Canvasite and Packinghouse Cords; Plain Rubber Sheathed and Braided Portable Cords; Elevator Lighting, Control and Annunciator Cables; Borderlight and Stage Cables; Damp-proof Office and Annunciator Wires and Cables; Special Flexible Cords, Cordage and Cables for Telephone Instruments and Radio; Magnet wires—cotton and silk covered; Organ Wire and Cable, Bare and tinned copper wire and cables.

UNITED

to render

BROADER SERVICE

SQUARE D COMPANY

OF DETROIT

and

Industrial Controller Co.

OF MILWAUKEE

to be known as the **SQUARE D COMPANY**

The Industry will profit from this combination of resources

In order to effect economies in operation and to render more complete and better service to the distributors and to all the users of the products of both companies concerned, the manufacturing, financial and engineering resources of the Square D Company, of Detroit, Michigan, and Peru, Indiana, and of the Industrial Controller Co., of Milwaukee, Wisconsin, have been united. Henceforth the two companies will be conducted under one management and will be known as the Square D Company.

The new company will serve the industry through three divisions, offering a greatly increased variety of products, each a leader in its field. The Switch and Panelboard Division, at Detroit, will manufacture Industrial Safety Switches, Meter Service Switches, SQUARE-Duct, Panelboards for both lighting and power, Fuse Cabinets and Voltage Testers. The Porcelain Division, at Peru, will manufacture Porcelain Insulators and special porcelain products. The Industrial Controller Division, at

Milwaukee, will manufacture Compensators, both automatic and hand-operated, Speed Regulators, Motor Circuit Switches, Automatic Starters, Field Rheostats, Magnetic Contactors, Pressure Switches and Float Switches.

The management of the Industrial Controller Division will be headed by Mr. F. W. Magin, who was General Manager of the Industrial Controller Co. for a considerable length of time. There will be no change in management of the *old* Square D Company and the management of the new and larger Square D Company will be in the same capable hands that guided the two combining companies to positions of prominence in the industry.

Strengthened through union, the new Square D Company offers a service that is more than adequate to meet the needs of an increasingly great number of users of industrial and domestic electric equipment, everywhere.

SQUARE D COMPANY, DETROIT, U. S. A.

FACTORIES AT: DETROIT, MICH., PERU, IND., AND MILWAUKEE, WIS.

SQUARE D COMPANY, CANADA, LTD., WALKERVILLE, ONTARIO

BRANCH OFFICES: Toronto, Montreal

BRANCH	OFFICES
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New York	Syracuse
Philadelphia	Buffalo
Baltimore	Pittsburgh
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Atlanta	Cleveland

SQUARE D

ELECTRICAL EQUIPMENT



BRANCH	OFFICES
Cincinnati	Kansas City
Chicago	Dallas
Milwaukee	Los Angeles
Minneapolis	San Francisco
Indianapolis	Portland
St. Louis	

(145)

Switches

QUICK MAKE & BREAK

Westinghouse Industrial "WK-60" or "66"

250 Volts Fusible				500 Volts AC Fusible			
Amps.	2 Pole	3 Pole		2 Pole	3 Pole		
30.....	#60100 \$10.90	#66101 \$12.70		#60154 \$14.55	#60155 \$18.15		
60.....	60103 13.65	60104 17.25		60157 16.35	60158 19.10		
100.....	60106 20.90	60107 27.25		60160 25.45	60161 29.05		
200.....	60109 32.70	60110 36.30		60163 40.00	60164 45.40		

250-500 Volts Non-Fusible				600 Volts Non-Fusible			
Amps.	2 Pole	3 Pole		3 Pole	4 Pole		
30.....	#60050 \$11.80	#60051 \$14.10		#60045 \$16.35	#60046 \$20.45		
60.....	60053 11.80	60054 14.50		60048 17.25	60049 21.80		
100.....	60133 20.00	60134 21.80		60057 25.00	60058 32.70		
200.....	60136 25.45	60137 30.90		60060 33.60	60061 47.20		

QUICK BREAK ONLY

Westinghouse "WK-62" Type "C"

250 Volts Fusible				500 Volts AC Fusible			
Amps.	2 Pole	3 Pole		2 Pole	3 Pole		
30.....	#62100 \$ 5.50	#62101 \$ 6.80		#62200 \$ 9.00	#62201 \$ 8.65		
60.....	62103 8.20	62104 10.00		62203 10.50	62204 10.90		
100.....	62106 12.70	62107 15.40		62206 14.50	62207 17.25		
200.....	62109 20.00	62110 26.30		62209 29.00	62210 32.70		

250-500 Volts Non-Fusible				600 Volts Non-Fusible			
Amps.	2 Pole	3 Pole		3 Pole	4 Pole		
30.....	#62047 \$ 7.70	#62048 \$ 8.15		#62051 \$ 9.00	#62052 \$11.80		
60.....	62013 8.20	62014 8.65		62054 10.50	62055 15.40		
100.....	62016 10.90	62017 12.25		62057 15.00	62058 23.60		
200.....	62019 19.00	62020 22.70		62060 25.40	62061 41.75		

MOTOR STARTING SWITCHES

Westinghouse

Type	Numbers	Volts	Fused For	2 Pole	3 Pole	4 Pole
WK-10	55868.....	110-220	For Plug Fuse	\$ 9.10		
WK-10	55864.....	110 to 440	" " "		\$11.00	
WK-11	62611.....	110	" " "	3.40		
WK-12	584627.....	115-230	For One Plug	4.40		
WK-12	584628.....	115-230	" Two "	6.00		
WK-15	545404.....	110-220	For Plug Fuse	10.00		
WK-15	545405.....	110-220	" Cart. "	12.70		
WK-20	55865.....	110-220	" Plug "	12.75		
WK-20	57530.....	110 to 550	" Cart. "	13.60		
WK-20	55866-57529.....	110 " 550	" Plug "	13.60	\$21.00	
WK-21	57551 1 Phase.....	110-220	1 Cart. "	36.30	38.30	
WK-21	57551 3 ".....	220-550	2 " "	38.10	38.10	
WK-22	60617-60838.....	220	For Cart. Fuse	18.25	29.00	
WK-22	60950-60951.....	550	" " "	23.60	34.50	

GENERAL UTILITY SWITCHES

Noark Closed Ends

Numbers	Amps.	Volts	Fused For	2 Pole	3 Pole
8283.....	30	125	For Plug Fuses.....	\$1.65	
8383-8483-8393.....	30	125	" " "	1.80	\$2.50
8683-8693.....	30	125	" " Quick Break.	2.75	3.20

METER SERVICE SWITCHES

Noark Sealed Service SECO Without End Walls

Test Type				Non Test Type			
Amps.	Fused For	No.	Price	No.	Price	No.	Price
30A Plug.....	9543	\$3.25	9523	\$4.45	8543	\$2.85	8523 \$3.00
30A Enclosed.....	9563	3.75	9533	4.00	8563	3.40	8533 3.55
30A Plug & Enc.....	9573	3.50			8573	3.15	8993 2.40
60A Enclosed.....	9566	15.05	9536	15.95	8566	14.20	8536 15.05
60A ".....	9576	14.15			8576	23.30	
100A ".....	9561	23.85	9531	25.60	8561	23.00	8531 23.85

Noark Accessible Service ACCO Without End Walls

Test Type				Non Test Type			
Amps.	Fused For	No.	Price	No.	Price	No.	Price
30A Plug.....	9343	\$3.65	9323	\$4.45	8343	\$3.35	
30A ".....	9353	3.95	9323	\$4.45	8353	3.65	8323 \$3.95
30A Enclosed.....	9363	4.85	9333	4.85	8363	4.55	8333 4.55
60A ".....	9366	16.80	9336	17.70	8366	15.95	8336 16.80
100A ".....	9361	25.60	9331	27.40	8361	24.75	8331 25.60

Noark Universal End Plates

No.	Price	No.	Price	No.	Price	No.	Price
No. 971123	—Without End Walls.....		\$3.45				
" 9723	" " "		4.65				
" 972123	" " "		4.30				
" 973333	" " "		3.75				
" 9753 & 9793	" " "		5.20				
" 975333-979333	" " "		4.85				

Noark Doall Without End Plate

2 Pole				3 Pole			
Amps.	Fused For	Numbers	Price	Numbers	Price		
30A Plug.....		913123-911123	\$ 2.70	912333-914333	\$ 3.45		
30A Enclosed.....		923123-921223	3.05	922333-924333	3.75		
60A ".....		923126-921226	8.45	925336	8.90		
100A ".....		923121-921221	15.05	925331	15.95		

NUBLADE SWITCHES

Noark Fusible

250 Volts Fusible				500 Volts AC Fusible			
Amps.	2 Pole	3 Pole		2 Pole	3 Pole		
30	8223 \$ 4.50	8233 \$ 5.05		8423 \$ 9.00	8433 \$ 8.55		
60	8226 8.10	8236 9.90		8426 9.90	8436 10.80		
100	8221 12.60	8231 15.30		8421 14.40	8431 17.10		
200	8222 19.80	8232 26.10		8422 28.80	8432 32.40		
400	8224 48.60	8234 66.60					

Noark Not-Fusible—Quick Break

2 Pole				3 Pole				4 Pole			
Amps.	Volts	No.	Price	No.	Price	No.	Price	No.	Price	No.	Price
30	250	8723	\$ 2.70	8733	\$ 4.05	8743	\$ 8.10				
30	500 AC	8623	7.65	8633	8.10	8643	10.80				
60	250-500	8626	8.10	8636	8.55	8646	13.50				
100	250-500	8621	10.80	8631	12.15	8641	20.70				
200	250-500	8622	18.90	8632	22.50	8642	37.80				
400	250-500	8624	39.60	8634	54.00	8644	86.40				

ACCESSORIES FOR NOARK SWITCHES

Single Piece End Wall for 30 Amp. Switches.....	\$.30	For 60 & 100 Amp.....	\$.80
Shutter for " 30 ".....	.15	" 60 " 100 ".....	.30
Universal End Wall No. 909103.....	.40		
Blanking Side No. 908103-908203.....	.15		
Trough—3 & 5" \$.40—6" \$.45—7".....	.50	8"—\$.55—9".....	.80
Cabinet Fuse Block No. 902413.....	1.25		

POLYPHASE

Noark Switches Without End Walls

125-250 Volts				Main Entrance			
"Doal" & 3 Wire				"Acco" Quad Break "Seco" Quad Break			
Amps.	No.	Price		Accessible Fuses	Sealed Fuses	No.	Price
30A.....	851233	\$ 4.70		77033	\$10.50	77533	\$10.40
60A.....	851236	11.70		77036	18.60	77536	15.05
100A.....	851231	19.20		77031	28.25	77531	24.75

Amps.	No.	Price		Meter Service	No.	Price
30A.....	931233	\$11.05		67033	\$11.15	67533 \$11.05
60A.....	931236	16.65		67036	20.35	67536 16.80
100A.....	931231	26.15		67031	30.00	67531 26.50

MAIN ENTRANCE SWITCHES

Noark Doall Without End Walls

Amps.	Fused For	Numbers	2 Pole	Price	Numbers	3 Pole	Price
30	Plug Fuses	813123-811123		\$ 2.70	812333-814333		\$ 3.45
30	Enclosed Fuses	853123-851223		3.75	852333-854333		4.30
60	"	853126-851226		8.45	855336		8.90
100	"	853121-851221		15.05	855331		15.95

SOLID NEUTRAL SWITCHES

Noark Fusible—Quick Break

Amps.	Volts	3 Pole-2 Poles	4 Pole-3 Poles	5 Pole-4 Poles
30	125-250	No. 8133 \$ 4.95	8143 \$ 8.10	8153 \$ 9.00
60	"	8136 9.00	8146 11.25	8156 19.80
100	"	8131 14.40	8141 19.80	8151 35.55
200	"	8132 22.50	8142 31.60	8152 50.40
400	"	8134 63.00	8144 81.00	8154 120.60

TOGGLE SWITCHES

Bulldog

30 A.-125 V.-2 Pole—One Blade	No. 111 & 211	BT-TE-TF & TM	Price
" " " 2 " Two "		TE-211S	4.50
" " " 3 " Three "		TE-311B	5.00
" " " 3 " Three "		TE-311S	8.10
" " " 3 " Three "		TE-311SG	7.20
" " 250 " 2 " Two "		TF-221S	5.40
" " " 3 " Three "		TF-321S	8.10
" " " 3 " Three "		TF-321SG	7.65
30 A.-500-600 V.-3 Pole—Three Blade 3 Fuse Conn.		TF-351S	12.60
" " 250-600 " 2 " "		TN-261S	5.40
" " " 3 " "		TN-361S	7.20
Motor Starter 3 " TJM-321S & TJM-321SU		TN-361SR	10.80

TYPE "C" SWITCHES

Bulldog Single Throw Fusible Quick Make & Break

250 Volts DC & AC			
Amps.	2 Pole	3 Pole	
30 125 Volt only.....	IF211S \$ 3.00	IF311S \$ 4.40	
30 Porc. Base.....	IF221S 3.15	IF321S 5.15	
30 End Plates.....	IF221P 3.15	IF321P 5.15	
30 Slate Base.....	IF221 5.40		
60 ".....	IF222 8.10	IF322 9.90	
100 ".....	IF223 12.60	IF323 15.30	
200 ".....	IF224 19.80	IF324 26.10	
400 ".....	SF223 48.60	SF325 66.60	

500-600 Volts A. C.

Amps.	3 Pole	4 Pole	
30 125 Volt only.....			
30 Porc. Base.....			
30 End Plates.....			
30 Slate Base.....	IF351 \$ 8.50	IF451 \$ 13.54	
60 ".....	IF352 10.80	IF452 14.46	
100 ".....	IF353 17.10	IF453 20.80	
200 ".....	IF354 32.40	IF454 46.80	
400 ".....	SF355 81.00	SF455 126.00	

TYPE "C" SWITCHES

Bulldog Single Throw Not-Fusible

Amps.	2 Pole	3 Pole	
30	250 Volts.....	JN221S \$ 3.15	JN321S \$ 4.15
30	250-500-600 Volts.....	JN251 7.65	JN351 8.10
60	" " " ".....	JN252 8.10	JN352 8.55
100	" " " ".....	JN253 10.80	JN353 12.15
200	" " " ".....	JN254 17.60	JN354 22.50
400	" " " ".....	SN255 36.00	SN355 46.80

Switches

Switches

30 Amp. Switches			Wadsworth 30 Amp. Switches			30 Amp. Switches		
No.	Price		Number	Price		Number	Price	
25	\$2.20		322	\$ 6.20		1423T	\$ 5.45	
26	2.65		331	4.85		1450	3.65	
27	2.50		332	6.55		1450T	4.25	
30	1.65		340	4.75		1451	3.95	
31	1.55		341	5.05		1451T	4.60	
33	1.65		360	3.20		1500	4.15	
38	2.50		361	4.55		1502	4.80	
39	3.75		362	4.15		1503	4.80	
131	3.90		370	4.15		1511	4.50	
132	3.30		372	4.95		1512	5.10	
133	3.90		380	5.05		1530	9.40	
141	4.15		382	5.15		1532	10.00	
142	3.75		392	5.45		1543	5.10	
143	4.15		440	6.20		1612	4.05	
144	4.55		441	6.55		1630	9.15	
145	4.95		443	6.65		1632	9.85	
151	3.40		461	7.05		1643	4.25	
152	3.00		462	6.70		2234	6.70	
153	3.40		463	7.05		2244	7.05	
154	4.45		464	6.70		2441	6.55	
211	4.15		633	5.35		2461	7.05	
212	3.75		734	11.15		2462	6.70	
213	4.15		1013	4.20		2463	7.05	
214	3.75		1014	6.10		2464	6.70	
221	2.65		1202	3.95		2534	6.75	
223	2.40		1212	4.25		2632	3.25	
224	3.00		1223	4.75		2633	4.65	
238	3.75		1250	3.65		2639	4.65	
241	5.45		1322	4.15		3032	11.15	
242	5.10		1323	4.75		3033	12.05	
243	5.45		1402	3.95		3532	9.10	
244	5.10		1403	4.25		3533	10.00	
271	4.00		1401T	4.55		3534	13.30	
272	4.00		1402T	4.65		3539	10.00	
273	4.70		1403T	4.80		3632	16.80	
274	4.40		1411T	5.15		3633	21.15	
284	5.20		1412	4.25		3634	22.05	
292	4.00		1412T	5.20		3639	21.10	
294	5.75		1423	4.75				

60 Amp. Switches			Wadsworth 100 Amp. Switches			200 Amp. Switches		
No.	Price		Number	Price		Number	Price	
161	\$ 9.60		102	\$15.70		522	\$19.80	
162	9.15		110	18.55		523	24.95	
163	11.80		111	18.55		722	37.05	
171	9.85		112	15.70		723	51.90	
172	9.15		113	18.95		724	57.35	
503	11.45		513	17.25		729	52.00	
1024	11.40		1033	11.55		1042	14.20	
1762	16.30		1034	16.50		1043	22.00	
1763	22.75		1712	27.35		1044	31.35	
1764	21.45		1713	35.40		2622	18.15	
1769	21.70		1714	35.00		2623	21.45	
1800	15.70		1719	30.90		2624	40.85	
1802	16.55		1900	24.35		2629	19.80	
1803	17.40		1902	25.20		3522	27.20	
1812	17.40		1903	26.10		3523	31.15	
1830	19.10		1912	26.10		3524	43.15	
1834	20.90		1930	28.70		3529	31.15	
1842	17.40		1934	30.50		3622	41.60	
1843	18.25		1942	26.10		3623	47.35	
1851	16.55		1943	27.90		3624	53.20	
2030	15.65		1951	26.10		3629	47.35	
2034	17.40		2130	25.20				
2042	15.70		2134	26.95				
2043	16.55		2142	24.40				
2051	14.80		2143	26.10				
2062	8.70		2151	24.40		642	\$55.45	
2064	13.30		2614	25.60		643	67.65	
3062	17.05		3512	14.65		742	61.65	
3063	22.05		3513	17.75		743	75.13	
3064	24.00		3514	25.60		744	91.30	
3069	22.05		3519	17.75		749	75.15	
3562	9.75		3612	24.85		1052	36.30	
3563	11.55		3613	31.95		1053	47.85	
3564	13.75		3614	35.90		1054	66.00	
3569	11.55		3619	31.95		2542	49.50	
						2543	61.00	
						2544	86.65	
						3542	54.45	
						3543	78.40	
						3544	94.05	
						3549	78.35	

EXTRA END WALLS—SHUTTERS—TRIMS—ETC.

Wadsworth			Type of Trim			Knock-Meter		
For	30 Amp. 125 Volt Switches		Flat	Extended	Shutter	Shutter	Shutter	ter
"	30 " 250 " " 2 Pole		.50	.85	.50	.35	.35	.17
"	60 " 250 " " 2 Pole		.65	.85	.65	.45	.45	.25
"	60 " 250 " 3 " "		.75	.90	.75	.50	.50	...
"	100 " 250 " 3 " "		.85	1.00	.85	.60	.60	...
"	100 " 250 " 3 " "		.90	1.10	.90	.60	.60	...
"	200 " 250 " 3 " "		1.00	1.15	1.00	.60	.60	...
"	200 " 250 " 3 " "		1.10	1.25	1.10	.55	.55	...

MURRAY SWITCHES

ENTRANCE SWITCHES

With End Wall			Description			2 Pole			3 Pole		
Amps.	Volts					No.	Price		No.	Price	
30	125		For Plug Fuses 1 Blade 1 Fuse			630	\$ 1.50				
30	125		" " " 2 " 2 "			231	1.65		230	\$2.25	
30	125-250		" " " " " "						831	2.10	
30	125-250		For 2 Cartridge Fuses						830	3.55	
60	250		" 3 Cart. Fuses-3 Phase-3 Wire						760	17.40	
60	250		" 3 " " 4 " 4 "						769	20.00	
100	250		" 3 " " 3 " 3 "						710	29.05	
100	250		" 3 " " 3 " 3 "						712	29.95	
200	250		" 3 " " 3 " 3 "						720	60.75	
200	250		" 3 " " 3 " 4 "						722	68.85	

ACCESSIBLE MAIN FUSE SWITCHES

Meter Test Type			Without End Walls		
Amps	Volts	Description	2 Pole	3 Pole	Price
30	125	For Plug Fuses One Fuse	755	\$ 3.65	
30	125	" " " 2 & 3 Fuse	748	3.95	\$ 4.45
30	250	" Cart. " One Fuse	738	4.20	
30	250	" " " Two Fuse	737	4.85	742 4.85
60	250	" " " For 1 Fuse	766	15.95	
60	250	" " " For 2 Fuse	764	16.85	765 17.70
100	250	" " " For 2 Fuse	718	25.60	719 27.40

Meter Test			3 Phase			3 & 4 Wire Type			Without End Walls		
Amps	Volts										
60	250		For 3 Cart. Fuses-3 Phase-3 Wire						767	\$19.90	
60	250		" 3 " " 3 " 4 "						768	23.00	
100	250		" 3 " " 3 " 3 "						711	30.00	
100	250		" 3 " " 3 " 4 "						714	32.45	
200	250		" 3 " " 3 " 3 "						721	64.80	
200	250		" 3 " " 3 " 4 "						723	72.90	

ACCESSIBLE MAIN FUSE TYPE

With Branches Combined			For Plug Fuses-2 Branches			780			782		
Amps	Volts										
30	125		" " " 4 "			781	6.35		783	7.15	
30	125		" " " 1 "			784	6.00				
30	125		" " " 2 "			785	6.65				

NOT METER TEST

30			125			For Plug Fuses-One Fuse			754			Without End Walls		
Amps	Volts													
30	125		" " " Two Fuses			752	3.65		753	3.95				
30	250		For Cart. " " "			757	4.55		758	4.55				
60	250		" " " " "			762	15.95		763	16.80				
100	250		" " " " "			716	24.75		717	25.60				

"UNISAFTI"
(Universal Standardized Switches)

Number			Pole			Fuse			Neutral			All 30 Amps.			Branches & Fusing			Price		
234	2		Single			1-2-Wire			2 Fuses									\$3.25		
235B	2		"			2-2 "			2 "									3.25		
236	2		"			4-2 "			2 "									4.30		
237	3		Two			1-3 "			2 "									3.75		
237	2		"			1-2 "			2 "									3.75		
237	3		"			2-2 "			2 "									3.75		
238	3		"			4-2 "			4 "									4.85		
238	2		"			2-2 "			4 "									4.85		

METER SERVICE SWITCHES

Fuses & Blades Dead			Sealed Fuses			Without End Walls		
Amps.	Volts	Description	No.	Price		2 Pole	3 Pole	Price
30	125	For Plug Fuses	232	\$ 2.20		233		\$ 3.35
60	250	For Cart. Fuses	364	15.05		365		15.95

Fuses Alive	
-------------	--



"De Luxe" Mahogany
Inlaid Plate No. OS71
with No. 3951 Tumbler
Switch



No. 3951 Flush Tum-
bler Switch



"Templus" Composi-
tion Plate No. OS51
with No. 3951 Tumbler
Switch, "Glo-Guide"
Handle



"De Luxe" Walnut
Inlaid Plate No. OF71
with No. 790 Single
Receptacle



No. 792 Duplex Flush
Receptacle



Brass Plate No. OV41
with No. 792 Duplex
Flush Receptacle

Pleasure and comfort in your home!

The Bryant switch and convenience outlet add to the comfort and pleasure of your client, your customer, and yourself.

We show in this photograph our No. 3951 flush tumbler switch (indications on handle) under a Bryant "De Luxe" wood inlaid plate.

In the baseboard is a "convenience" outlet that is really convenient—a concave boss with finding rib makes easy the insertion of the prongs of the cap.

This receptacle is also covered with a "De Luxe" wood inlaid plate.

Attractive in appearance and reliable in operation Bryant "Superior Wiring Devices"—sockets, switches and convenience outlets that are convenient—with Bryant "De Luxe" wood inlaid, "Templus" Composition, or Hemco plates in colors, fit into any plan of room or home decoration.

Catalog of over twenty-five hundred wiring devices sent on request.



THE BRYANT ELECTRIC COMPANY

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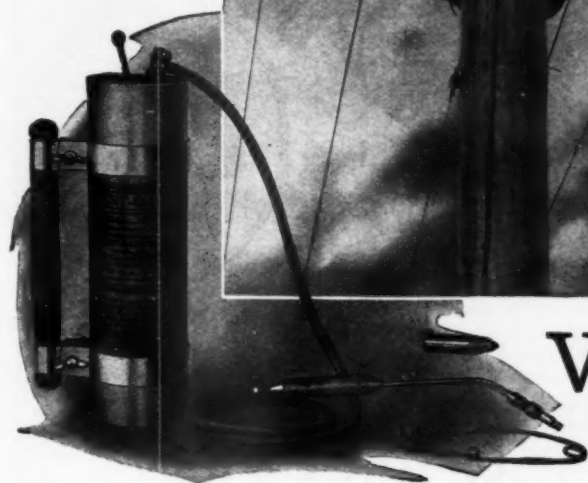
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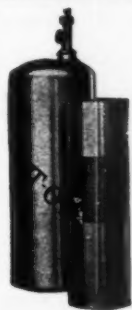
A torch . . . instantly ready



WITH Prest-O-Lite torch equipment you can get right on the job. It is always ready to use—simply turn on the gas and light it—no pumping, no pre-heating, no waste of fuel between jobs.

Utility men throughout the country are using Prest-O-Lite. With its hot, concentrated, easily controlled flame, they are handling the most delicate work without heating or burning adjacent parts. They are cutting the time and cost of soldering, brazing, and heating operations and doing a better job.

Phone the Prest-O-Lite Gas Distributor about this equipment or write us direct for complete information.




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GAS**

THE PREST-O-LITE COMPANY, Inc.

Unit of Union Carbide and Carbon Corporation

NEW YORK  CHICAGO
Carbide and Carbon Building Railway Exchange Building

SAN FRANCISCO
Adam Grant Building



Clean Even Threads— That Make Work a Joy

Reason: Perhaps this one has made more friends for Mohawk Rigid Conduit and saved more money for contractors than any other quality.

The other reasons are: Smooth finish; tough glossy enamel. Pipe bends so easily, you hardly realize it is steel. Heavy Rigid Conduit; impervious to acids; durable as the building.

*Mohawk may be had in either
Indian Black {enamel} or Indian White {galvanized}
Ask your jobber or nearest Mohawk Conduit Co. branch.*

MOHAWK CONDUIT CO., Inc.

COHOES, NEW YORK

**BRANCH OFFICES: NEW YORK-CHICAGO-CLEVELAND-ST. LOUIS
BOSTON-SEATTLE-DENVER-LOS ANGELES-NORFOLK**

The New Sterling KAS-LITE - Junior



**Distinctive Pleasing Design
Improved Compact Construction
Economy and Low Cost
Smaller and More Efficient
Does Not Obstruct the View**

KAS-LITE *Junior* provides an unusual combination of efficiency, appearance, low cost, and economy in Show Case Lighting heretofore not available.

New, Desirable Features

Size: 7½" long x 1½" high. About one-half the size of ordinary units.

Lamp: Utilizes new standard 25-Watt, T-6½, intermediate screw base, tubular Mazda Lamp.

Assembly: Can be assembled easily and quickly. No screws are used. Socket slides in the housing and Reflector snaps into place.

Installation: Special friction couplings make the threading of connecting tubing unnecessary and permits of easy installation.

Finish: Finished throughout in Statuary Bronze which harmonizes perfectly with the various woods and metals used in show cases.



REFLECTOR & ILLUMINATING CO.
Manufacturers & Engineers

1415 Jackson Blvd.

Chicago, U. S. A.

REPRESENTATIVES IN ALL PRINCIPAL CITIES

S-SUNDRIES

STEEL WOOD SCREWS

Flat Head

Length	Number Per Dozen	Price Per Dozen				
		Up To 4	No. 5	No. 6	No. 7	No. 8
1/4"	"	\$.05	\$.05	\$.05	\$.05	\$.05
3/8"	"	".05	".05	".05	".05	".05
1/2"	"	".05	".05	".05	".05	".05
5/8"	"	".05	".05	".05	".05	".05
3/4"	"	".05	".05	".05	".05	".05
7/8"	"	".05	".05	".05	".05	".05
1"	"	".05	".05	".05	".05	".05
1 1/4"	"	".05	".05	".05	".05	".05
1 1/2"	"	".05	".05	".05	".05	".05
1 3/4"	"	".05	".05	".05	".05	".05
2"	"	".05	".05	".05	".05	".05
2 1/4"	"	".05	".05	".05	".05	".05
2 1/2"	"	".05	".05	".05	".05	".05
2 3/4"	"	".05	".05	".05	".05	".05
3"	"	".05	".05	".05	".05	".05
3 1/4"	"	".05	".05	".05	".05	".05
3 1/2"	"	".05	".05	".05	".05	".05
3 3/4"	"	".05	".05	".05	".05	".05
4"	"	".05	".05	".05	".05	".05

Length	Number Per Dozen	Price Per Dozen				
		No. 9	No. 10	No. 12	No. 14	No. 16
1/4"	"	\$.05	\$.05	\$.05	\$.05	\$.05
3/8"	"	".05	".05	".05	".05	".05
1/2"	"	".05	".05	\$.06	\$.07	\$.07
5/8"	"	".05	".05	\$.06	\$.07	\$.07
3/4"	"	".05	".05	\$.06	\$.08	\$.09
7/8"	"	".05	".05	\$.06	\$.08	\$.10
1"	"	".05	".05	\$.06	\$.08	\$.11
1 1/4"	"	".05	".05	\$.06	\$.09	\$.11
1 1/2"	"	".05	".05	\$.06	\$.09	\$.11
1 3/4"	"	".05	".05	\$.06	\$.10	\$.12
2"	"	".05	".05	\$.06	\$.10	\$.12
2 1/4"	"	".05	".05	\$.06	\$.10	\$.12
2 1/2"	"	".05	".05	\$.06	\$.10	\$.12
2 3/4"	"	".05	".05	\$.06	\$.10	\$.12
3"	"	".05	".05	\$.06	\$.10	\$.12
3 1/4"	"	".05	".05	\$.06	\$.10	\$.12
3 1/2"	"	".05	".05	\$.06	\$.10	\$.12
3 3/4"	"	".05	".05	\$.06	\$.10	\$.12
4"	"	".05	".05	\$.06	\$.10	\$.12

BRASS SCREWS

Round, Flat or Oval Head

Length	Number Per Dozen	Price Per Dozen				
		Up to 4	No. 5	No. 6	No. 8	No. 9
1/4"	"	\$.06	\$.06	\$.07	\$.08	\$.10
3/8"	"	".06	".07	".08	".09	\$.11
1/2"	"	".07	".07	".08	".10	\$.11
5/8"	"	".07	".07	".08	".11	\$.12
3/4"	"	".08	".08	".09	".12	\$.13
7/8"	"	".08	".08	".09	".12	\$.13
1"	"	".08	".08	".09	".12	\$.13
1 1/4"	"	".08	".08	".09	".12	\$.13
1 1/2"	"	".08	".08	".09	".12	\$.13
1 3/4"	"	".08	".08	".09	".12	\$.13
2"	"	".08	".08	".09	".12	\$.13
2 1/4"	"	".08	".08	".09	".12	\$.13
2 1/2"	"	".08	".08	".09	".12	\$.13
2 3/4"	"	".08	".08	".09	".12	\$.13
3"	"	".08	".08	".09	".12	\$.13

Length	Number Per Dozen	Price Per Dozen				
		No. 10	No. 12	No. 14	No. 16	No. 18
1/4"	"	\$.11	\$.11	\$.11	\$.11	\$.11
3/8"	"	\$.12	\$.14	\$.14	\$.14	\$.14
1/2"	"	\$.12	\$.14	\$.14	\$.14	\$.14
5/8"	"	\$.12	\$.14	\$.14	\$.14	\$.14
3/4"	"	\$.12	\$.14	\$.14	\$.14	\$.14
7/8"	"	\$.12	\$.14	\$.14	\$.14	\$.14
1"	"	\$.12	\$.14	\$.14	\$.14	\$.14
1 1/4"	"	\$.12	\$.14	\$.14	\$.14	\$.14
1 1/2"	"	\$.12	\$.14	\$.14	\$.14	\$.14
1 3/4"	"	\$.12	\$.14	\$.14	\$.14	\$.14
2"	"	\$.12	\$.14	\$.14	\$.14	\$.14
2 1/4"	"	\$.12	\$.14	\$.14	\$.14	\$.14
2 1/2"	"	\$.12	\$.14	\$.14	\$.14	\$.14
2 3/4"	"	\$.12	\$.14	\$.14	\$.14	\$.14
3"	"	\$.12	\$.14	\$.14	\$.14	\$.14

For Gross Lots Multiply dozen price 7 times.

LAG SCREWS

Length	3"	3 1/4"	4"	4 1/4"	5"	6"
3/4" Price Each	\$.05	\$.05	\$.05	\$.05	\$.05	\$.10
1 1/4" " "	".07	".08	\$.09	\$.10	\$.10	\$.10

STRAPS—CLIPS OR CLAMPS

Without Screws, For Pipe

	1/4-3/4"	3/4"	1"	1 1/4"
Tinned Straps 2 Hole Price Each	\$.01	\$.01	\$.01	\$.01
Light Steel Straps-1 Hole Price Each	".03	".03	".05	".08
Mall Iron Straps-1 Hole Price Each	".07	".08	".10	".18
P & S Conduit Clips With Bolts	".10	".14	".18	".22
	1 1/4"	2"	2 1/4"	3"
Tinned Straps 2 Hole Price Each	\$.02	\$.03	\$.04	\$.05
Light Steel Straps-1 Hole Price Each	".10	".15	".30	".45
Mall Iron Straps-1 Hole Price Each	".25	".45	".70	\$.95
P & S Conduit Clips With Bolts	".26			

SOLDER

	40-60 Bar or Wire	50-50 Bar or Wire	Resin Core	Ribbon 30-70	Allen Alumi- Flex
Per Pound	\$.70	\$.85	\$1.15	\$.80	\$2.70
Per Ounce	.10	.10	.15	.10	.20

Tape

SOLDER PASTE

Make	2 oz. Cans	2 oz. Tubes	4 oz. Cans	Half Pound Cans	One Pound Cans
Allen	\$.30	\$.40	\$.55	\$.90	\$1.50
Burnley	".20	".30	".40	".70	1.00
Crescent	".25	".35	".55	".85	1.00
G. E.	".20	".30	".40	".70	1.00
Highland	".30	".40	".55	".90	1.50
Nokorode	".20	".30	".40	".70	1.50

SOLDERING SALTS

	1/2 Lb.	1 Lb.
Burnley	\$.65	\$1.00
Eaco	".80	1.40
Yeager	".65	1.00
McGill Crescent	".75	1.00
Nokorode	".85	1.50
Allen	".75	1.00

SOLDER STICKS

	Price
Burnley	\$.20
Eaco	".25
Samson	".30
Allen	".40
Crescent	".25
GE	".25

FIXTURE STUDS

	1/4"	1/2"
Four Prong Fixture Studs Less Bolts	\$.10	\$.15
Bolts Extra	".01	".01
No Bolt Fixture Studs	".10	".15

STAPLES

Staples Insulated Nails Per Dozen	\$.05
Leather Nail Heads Per Dozen	".05
Milonite Insulated Nails Per Dozen	".05

TAPE

FRICTION TAPE

	Per Pound	Per Half Pound	Per 2 Ounce	Per 1 Ounce	Per Foot
Amazon Friction	\$.60	\$.30	\$.10	\$.05	\$.01
Adhere	".65	".35	".10	".05	".01
Bulldog	".70	".40	".10	".05	".01
Cataract	".65	".30	".10	".05	".01
Commodity	".55	".30	".10	".05	".01
Dutch Brand	".65	".35	".10	".05	".01
Everstick	".55	".30	".10	".05	".01
Eaco	".95	".50	".15	".10	".02
G. E.	".55	".30	".10	".05	".01
Grimshaw	1.95	1.00	".20	".10	".02
Holdfast	1.00	".55	".15	".10	".01
Holdrite	".75	".35	".10	".05	".01
I X L	".65	".35	".10	".05	".01
Illinois	".55	".30	".10	".05	".01
Johns Manville Armature	1.75	".90	".20	".10	".02
" Jomanco	1.15	".60	".15	".10	".02
" White	1.35	".70	".20	".10	".02
" No. 3 Now No. 5	".75	".40	".10	".05	".01
" No. 6 " " 40	".60	".30	".10	".05	".01
Jaxon	".60	".30	".10	".05	".01
Leader	".70	".35	".10	".05	".01
Manson	1.20	".65	".20	".10	".02
Magnet	".75	".40	".10	".05	".01
O. K.	".60	".30	".10	".05	".01
P & B	1.00	".55	".15	".10	".02
Peerless	".60	".35	".10	".05	".01
Service	".90	".50	".15	".10	".02
Stanpat	".55	".30	".10	".05	".01
Sticks	".55	".30	".10	".05	".01
Victor W. E.	".55	".30	".10	".05	".01
Vim Gray	1.10	".60	".15	".10	".02
W. E. Railway Signal	1.00	".45	".15	".10	".02

RUBBER TAPE

	1/2"	3/4"	1"	1 1/4"	1 1/2"
Amazon Rubber	\$.95	\$.45	\$.15	\$.10	\$.04
Alexall	1.20	".65	".15	".10	".04
Alpha	1.15	".60	".15	".10	".04
Brooklyn	".70	".35	".10	".05	".03
Cataract	".70	".40	".10	".05	".03
Dutch Brand	".70	".35	".10	".05	".03
Elico	".60	".30	".10	".05	".03
G. E.	".60	".35	".10	".05	".03
Holdfast	1.00	".60	".15	".10	".04
Imperial	".65	".35	".10	".05	".03
Illinois	".60	".35	".10	".05	".03
Okonite	1.55	".80	".20	".10	".04
Para	".75	".40	".10	".05	".03
Pittsburgh	".70	".35	".10	".05	".03
Relio	".65	".30	".10	".05	".03
Security	".55	".30	".10	".05	".03
U. S. Rubber	".65	".35	".10	".05	".03
W. E. Victor	".55	".30	".10	".05	".03

Time Switches

TIME SWITCHES

BUCKEYE TIME SWITCHES

	Without Term. Box	With Term. Box
110 or 220 V.-Sgle or Dble Pole-10 A.....	\$19.50	\$28.00
" " " " " " 20 A.....	23.00	30.00
" " " " " " 30 A.....	26.00	32.00
" " " " " " 50 A.....	30.00	36.00
Specials.....	26.00	30.00
Buckeye Combination Time Switch Remote Control Unit Complete		\$ 70.00
AC Capacity up to 125A.-110 or 220 Volt-2 & 3 Wire		125.00
DC		

HARTFORD TIME SWITCHES

	10 Amp.	20 Amp.	35 Amp.	50 Amp.
Type B Single or Double Pole.....	\$36.00	\$39.00	\$42.00	\$50.00
Type B Triple Pole.....	38.00	41.00	45.00	.....
Type C & D Single or Double Pole.....	39.00	42.00	47.00	52.00
Type C & D Triple Pole.....	41.00	45.00	49.00	.....
Type G Apt. Hall Light Control D.P.	38.00	.....	60.00	.....

PARAGON TIME SWITCHES

Indoor	All 250 Volt	Outdoor
No. 1—\$47.00	30 Amp. Double Pole	No. 2—\$47.00
No. 1—50.00	50 " " "	No. 2—50.00
No. 1—50.00	30 " Triple "	No. 2—50.00
No. 3—45.00	20 " Double "	No. 4—45.00
No. 3—40.00	10 " " "	No. 4—40.00
No. 3—45.00	10 " Triple "	No. 4—45.00
Sunday Shut Off—Extra.....		\$5.00
Attachment for Turning on earlier.....		5.00

RELIANCE & RACINE SWITCHES

	10 Amp.	20 Amp.	30 Amp.	50 Amp.
Racine Type 1R-2R.....	\$19.50	\$23.00	\$32.00	\$36.00
Reliance Type 1R-20-30-50.....	28.00	30.00	32.00	33.00
Reliance Type 15 Triple Pole.....	.....	32.00	.....	.....

TORK TIME SWITCHES OR CLOCKS

Description	Indoor	Outdoor	Switchboard
Single Pole 15 Amp. 125 Volt	#115—\$20.00	#215—\$25.00	#015—\$19.00
Double " 30 " 250 "	#130—25.00	#230—30.00	.....
Single " Double Throw	#166—25.00	.....	.....
Double " Momentary Contact	#111—25.00	.....	.....
Dble. Pole 30 A. 250 V. Windless	#730—60.00	#830—65.00	#930—58.00
Combination Type—with Clock and Contactor			
For AC Only	Description	For DC Only	
No. 76062 \$50.00	60 Amps. 2 Pole	No. 75062 \$ 70.00	
No. 76102 75.00	100 " 2 Pole	No. 75102 125.00	

ZENITH

Description	Closed Face No. 110	Open Face No. 134	Windless AC
10 Amp. Double Pole	\$20.00	\$26.00	\$ 25.00
20 " " "	23.00	28.00	.....
30 " " "	25.00	30.00	46.00
60 " " "	.....	.....	55.50
100 " " "	.....	.....	77.50
200 " " "	.....	.....	110.00
Apartment House	26.00	30.00	.....

TRANSFORMERS

BELL & TOY TRANSFORMERS

Name	Style	Watt	Secondary Volts	50 to 133 Cycle	25 to 40 Cycle
ED- WARDS	Steel Clad Bell	25	Single	No. 86 \$ 1.30	No. 86 \$ 1.50
		25	Three	86T 1.55	86T 1.75
	Porcelain Bell	25	Single	87 1.55	87 1.75
	Out. Box Bell	25	Single	86ER 1.55	86ER 1.75
	Heavy Duty	50	8-16-24	88 4.60	88 5.10
	" " "	75	" " "	89 6.95	89 7.65
	" " "	100	" " "	90 8.10	90 9.00
	Toy	50	3 to 18	870 3.85	870 4.50
	" " "	75	3 to 24	871 6.35	871 7.65
	" " "	100	2 to 30	872 9.50	872 11.40
G. E.	Bell Residence	12 Volt		2332 1.30	192340 1.50
	Box Type	12 " "		2488 1.45	2490 1.60
	Heavy Duty	50	8-16-24	2333 5.10	2339 7.10
	" " "	100	10-20-30	2334 8.05	2340 11.20
HEMCO	Mold. Single	25	8 Volts	221 1.50	.....
	Mold. 3 Circuit	25	6 to 18V.	222 2.00	.....
	Steel Sgle. Cir.	25	8 Volts	225 1.45	.....
	Steel 3 Circuit	25	6 to 18V.	226 1.65	.....
	Box Type Sgle. Cir.	25	8 Volts	227 1.50	.....
	Box Type 3 Cir.	25	6 to 18V.	228 2.00	.....

BELL & TOY TRANSFORMERS—Continued

Wizard	25	10 Volt	230-101	1.30	230-102	1.50
Nacode	25	11 Volt	230-111	1.45	230-112	1.65
Tri-Volt	25	6 to 18V.	230-121	1.45	230-122	1.65
Porcelain			230-131	1.45	.....	.....
Little Jeff Toy	50	5 1/2-13	535-101	3.65	535-102	4.30
Midget Toy	75	5 1/2-22	535-121	4.50	535-122	5.40
Model 2 Toy	100	5 1/2-23	535-131	6.65	535-132	8.25
Model 3 Toy	150	1-30	535-141	8.55	.....	.....
Heavy Duty A	50	6 to 20	231-101	5.00	231-102	7.10
" " B	75	6 to 20	231-111	7.60	231-112	10.10
" " C	125	6 to 24	231-121	10.15	231-122	12.80
" " E	250	6 to 24	231-141	20.80	231-142	25.65
Blue Bell	10	8 Volt	6166	1.25	.....	.....
Tri-Volt	20	6 to 16	6163	1.45	6196	1.40
Box Type	10	8 Volt	7166	1.45	.....	.....
Porcelain Case	10	8 Volt	4166	1.45	.....	.....
A Single Volt	25	8 Volt	A-1	1.30	A-1	1.50
A Three " "	25	6 to 14	A-13	1.55	A-13	1.75
B " " "	50	6 to 14	B-1	4.10	B-1	4.50
C " " "	75	8 to 24	C-1	6.00	C-1	6.75
D " " "	125	15 to 40	D-1	9.75	D-1	12.00
Porcelain	25	8	AP-1	1.45	AP-1	1.75
Box Type	25	8	OB-1	1.50	OB-1	1.75
Toy 1-Junior	50		No. 1	3.75	.....	.....
" 2-Senior	100		No. 2	6.25	.....	.....
" 3-Niagara	150		No. 3	9.50	.....	.....
S-1 Sgle. Volt	15		S-1	1.30	.....	.....
S-3 3 Volt	15		S-3	1.40	.....	.....
D-1 Sgle. Volt	25		D-1	1.50	.....	.....
D-3 3 Volt	25		D-3	1.70	.....	.....
HD-1 3 Volt	50		HD-1	5.35	.....	.....
EHD 3	100		EHD-1	6.65	.....	.....
" 3	200			18.00	.....	.....
" 3	300			31.00	.....	.....

NOTE: For 220 Volt Transformers add 20% to above prices.

WIRES

RUBBER COVERED WIRES

Special Price on No. 14 S.B. Wire

In less than Coil Lots.....	Per Foot
In Coil Lots.....	\$.01 1/2
Other Sizes	No. 18 No. 16 No. 14
Fixture Wire Light.....	\$.01 \$.01 1/2 \$.01 1/2
" Heavy.....	.01 1/2 .01 1/2 .01 1/2
Solid Single Braid.....	.01 1/2 .01 1/2 See Above
" Double.....	.01 1/2 .01 1/2 .02
Stranded Sgle. Braid.....	.01 1/2 .01 1/2 .02 1/2
" Dble. ".....	.01 1/2 .01 1/2 .02 1/2
Duplex Single Braid.....	..... .04 1/2
" Double ".....	..... .04 1/2
Other Sizes	No. 12 No. 10 No. 8 No. 6
Fixture Wire Light.....	No. 12 No. 10 No. 8 No. 6
" Heavy.....	No. 12 No. 10 No. 8 No. 6
Solid Single Braid.....	\$.02 1/2 \$.03 \$.04 1/2 \$.07
" Double.....	.02 1/2 .03 1/2 .05 .07 1/2
Stranded Sgle. Braid.....	.03 .04 .05 1/2 .07
" Dble. ".....	.03 .04 .05 1/2 .07 1/2
Duplex Single Braid.....	.05 1/2 .06 1/2 .08 1/2
" Double ".....	.06 1/2 .07 1/2 .09 1/2

LARGER SIZES DOUBLE BRAID STRANDED

Size	Price Per Foot
No. 8 D. B.....	\$.05 1/2
No. 6 D. B.....	.07 1/2
No. 4 D. B.....	.10
No. 3 D. B.....	.12
No. 2 D. B.....	.14
No. 1 D. B.....	.19
No. 0.....	.23
No. 00.....	.33
No. 000.....	.40

CIRCULAR MILL CABLE

Size	Price Per Foot
250,000 C. M.....	\$.48
300,000 C. M.....	.57
350,000 C. M.....	.65
400,000 C. M.....	.73
450,000 C. M.....	.84
500,000 C. M.....	.90
600,000 C. M.....	1.00
700,000 C. M.....	1.26
750,000 C. M.....	1.34
800,000 C. M.....	1.44
900,000 C. M.....	1.60
1,000,000 C. M.....	1.76

WEATHERPROOF WIRE

Triple Braid

	No. 18	No. 16	No. 14	No. 12	No. 10	No. 8	No. 6
Per Pound Solid.....	\$.66	\$.62	\$.58	\$.56	\$.51	\$.50	\$.46
" " Stranded.....	.01	.01½	.02	.02½	.03	.04	.05
Per Foot Solid.....	.01½	.01½	.02½	.03	.03½	.04½	.05½
Number Feet Per Pound...	90	70	40	30	20	13	

EXTRAS—For slow burning W. P. Wire—Per Pound Extra.....	\$.01
For Twisted Pair W. P. Wire—Per Pound Extra.....	.02
For Double Braid W. P. Wire—Per Pound Extra.....	.01
For Medium Hard Drawn—Per Pound Extra.....	.00½

For Armored Cables See Page PL-9.

WIRES, SUNDRY

ANNUNCIATOR—TELEPHONE, ETC.

	Description	No. 18	No. 16
Fixture Wire	Solid Light ¼ Per Foot.....	\$.01	\$.01½
	" Heavy ½ " ".....	.01½	.01½
	Stranded Light ¼ " ".....	.01½	.01½
	" Heavy ½ " ".....	.01½	.01½

	Description	No. 18	No. 16
Annunciator Wire	Single Per Pound.....	.65	.63
	" Per Foot.....	.00½	.00½
	Twisted or Duplex Per Pound.....	.70	.67
	" " Per Foot.....	.01	.01½

	Description	No. 18	No. 16
Office & Damp Proof Wire	Single Per Pound.....	.80	.75
	" Per Foot.....	.01	.01½
	Twisted or Duplex Per Pound.....	.85	.80
	" " Per Foot.....	.02	.02½

"Deltabeston" or similar	Single Stranded Black Per Foot.....	.03	.03½
	Single Stranded Colored Per Foot.....	.04	.04
	Single Glazed Cotton Per Foot.....	.04	.04
	Single Artificial Silk Per Foot.....	.04½	.05
	Duplex Glazed Cotton Per Foot.....	.08	.09
	Duplex Artificial Silk Per Foot.....	.09	.10
	Twisted Pair Glazed Cotton Per Foot.....	.08	.09
	Twisted Pair Artificial Silk Per Foot.....	.09	.10

	Description	No. 18	No. 16
Asbestos Range Wire	Asbestos Range Wire or Switch Board Wire Per Foot.....	\$.10	\$.12

	Description	No. 14	No. 12
Annunciator Wire	Single Per Pound.....	\$.60	
	" Per Foot.....	.01	
	Twisted or Duplex Per Pound.....	.64	
	" " Per Foot.....	.02	

	Description	No. 14	No. 12
Office & Damp Proof Wire	Single Per Pound.....	.71	
	" Per Foot.....	.01½	
	Twisted or Duplex Per Pound.....	.75	
	" " Per Foot.....	.03	

"Deltabeston" or similar	Single Stranded Black Per Foot.....	\$.04	\$.05
	Single Stranded Colored Per Foot.....	.05	.06
	Single Glazed Cotton Per Foot.....	.05	.07
	Single Artificial Silk Per Foot.....	.05½	.08
	Duplex Glazed Cotton Per Foot.....	.10	
	Duplex Artificial Silk Per Foot.....	.11	
	Twisted Pair Glazed Cotton Per Foot.....	.10	
	Twisted Pair Artificial Silk Per Foot.....	.11	

Asbestos Range Wire	Asbestos Range Wire or Switch Board Wire Per Foot.....	.13	.15
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COVERED TELEPHONE WIRES

	No. 22	No. 20	No. 19	No. 18	No. 17	No. 16	No. 14
Inside Ph'ne Wire Per Ft....	\$.03	\$.03	\$.03	\$.04	\$.04	\$.05	\$.06
Outside " " " " " " " "	.03	.03	.03	.03½	.03½	.04	.05

GALVANIZED TELEPHONE WIRE

	No. 4	No. 6	No. 8	No. 10	No. 12	No. 14
EBB Extra Best Per Pound...	\$.13	\$.13	\$.13	\$.13	\$.14	\$.15
B. B. Best Best " " " "	.12	.12	.12	.12	.13	.14
Steel " " " " " " " "	.11	.11	.11	.11	.12	.13
Weight Per 1000 Feet.....	153	112	74	49	32	19
Weight Per Mile.....	811	590	390	258	170	99

WIRE, MAGNET

Price Per Pound

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Enamel-ed Cotton	Enamel-ed Single Cotton	Enamel-ed Double Cotton
6	\$.72	\$.74					
8	.74	.76					
10	.75	.80			.79	.80	.83
12	.77	.83			.75	.82	.86
14	.80	.85			.78	.86	.93
16	.82	.90	\$ 1.15	\$ 1.35	.80	.89	.97
18	.85	.95	1.20	1.55	.83	.95	1.05
20	.90	1.10	1.25	1.65	.85	1.05	1.15
22	.97	1.20	1.40	1.85	.87	1.15	1.25

MAGNET WIRE—Continued

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Enamel-ed Cotton	Enamel-ed Single Cotton	Enamel-ed Double Cotton
24	\$1.10	\$1.35	\$1.60	\$2.25	\$.93	\$1.25	\$1.45
26	1.25	1.65	1.90	2.65	1.10	1.45	1.85
28	1.50	2.10	2.25	3.20	1.15	1.70	2.35
30	1.85	2.60	2.75	4.10	1.20	2.10	2.80
32	2.30	3.40	3.65	5.50	1.35	2.70	3.75
34	3.00	4.00	4.70	7.50	1.55	3.40	4.75
36	4.00	5.25	6.20	10.00	2.00	4.75	5.75
38	5.75	8.00	8.90	15.10	2.25	5.55	9.25
40	8.00	11.50	13.30	20.50	4.10	9.00	13.10

NOTE: For odd sizes use half the increase of next larger size.
For ¼ lb. lots use one third of above prices.
For one ounce lots use one tenth of above prices.

Price Per 100 Feet

Size	Single Cotton	Double Cotton	Single Silk	Double Silk	Enamel-ed Cotton	Enamel-ed Single Cotton	Enamel-ed Double Cotton
6	\$6.00	\$6.10					
8	3.70	3.90					
10	2.80	2.90			\$2.45	\$2.90	\$3.10
12	1.85	1.90			1.65	1.85	2.00
14	1.25	1.30			1.05	1.20	1.35
16	1.00	1.10	\$1.20	\$1.35	.85	1.00	1.20
18	.75	.80	.90	1.00	.65	.80	1.00
20	.65	.70	.75	.80	.55	.70	.90
22	.40	.45	.50	.55	.35	.50	.70
24	.35	.40	.45	.50	.30	.40	.60
26	.25	.30	.35	.40	.20	.25	.35
28	.20	.25	.30	.35	.18	.23	.30
30	.15	.20	.25	.30	.15	.20	.25
32	.12	.15	.20	.25	.12	.15	.20
34	.10	.12	.15	.20	.09	.10	.15
36	.10	.12	.15	.20	.09	.10	.15
38	.10	.12	.15	.20	.09	.10	.15
40	.10	.12	.15	.20	.09	.10	.15

Note: Prices per 100 feet are higher than per pound rate to cover cost of measuring and should be used only for small lot sales.

WIRES & CABLES

LEAD COVERED & PARK CABLE

LEAD & RUBBER COVERED

Size	Price Per Foot	Single Conductor Solid	Stranded
No. 16		\$.04½	\$.05
No. 14		.05½	.06½
No. 12		.06	.07
No. 10		.08½	.10
No. 8		.10	.11
No. 6		.15	.17
No. 4			.20
No. 3			.24
No. 2			.30
No. 1			.35
No. 1/0			.40
No. 2/0			.44
No. 3/0			.52
No. 4/0			.60
250,000 C. M. Cable.....			.75
300,000 C. M. ".....			.85
350,000 C. M. ".....			.95
400,000 C. M. ".....			1.05
500,000 C. M. ".....			1.25
600,000 C. M. ".....			1.55
700,000 C. M. ".....			1.75
750,000 C. M. ".....			1.82
800,000 C. M. ".....			1.93
900,000 C. M. ".....			2.12
1,000,000 C. M. ".....			2.28

NOTE: Above prices are based on following quantities:
No. 16 to No. 8 Less than 100 ft.
No. 6 and larger less than 50 ft.

Size	Price Per Foot	Duplex Solid	Stranded	Three (3) Conductor Solid	Stranded
No. 16		\$.06		\$.14	
No. 14		.08		.17	
No. 12		.12		.20	
No. 10		.14		.27	
No. 8		.17		.32	
No. 6		.28		.48	
No. 4			.40		.67
No. 2			.62		.87
No. 1			.68		1.25
No. 1/0			.70		1.32
No. 2/0			.92		1.52
No. 3/0			1.05		1.68
No. 4/0			1.28		2.15

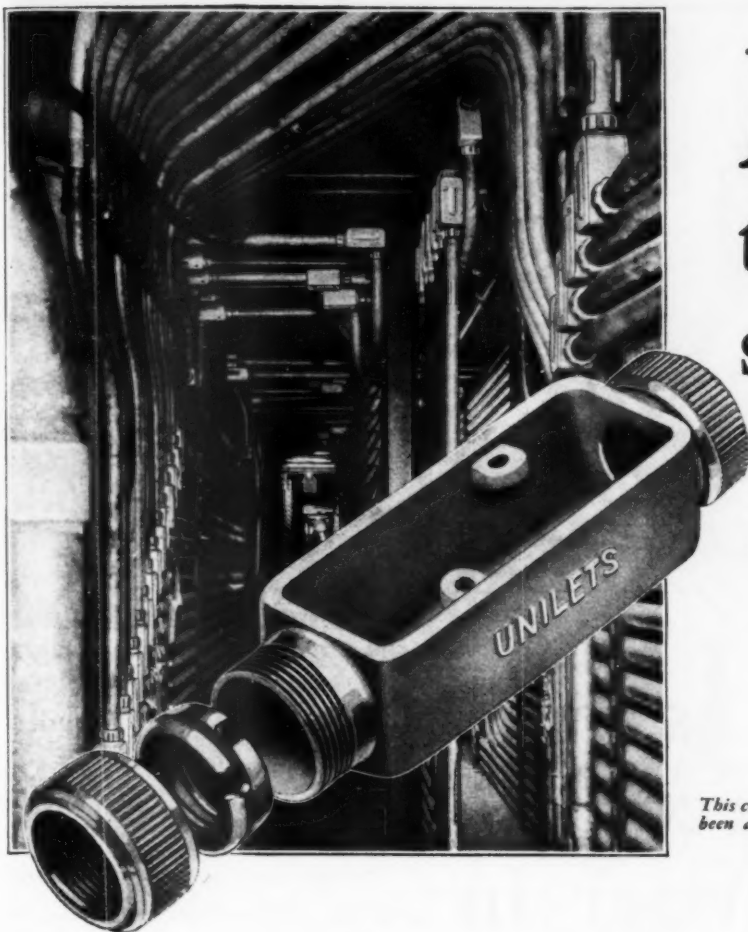
NOTE: Above prices are based on following quantities:
No. 16 to No. 8 Less than 100 ft.
No. 6 and larger less than 50 ft.

STEEL TAPED PARK CABLE

600 V. only

Size	1 Cond.	2 Cond.	3 Cond.
No. 12 Solid.....	\$.15	\$.22	\$.33
No. 10 ".....	.18	.25	.37
No. 8 ".....	.20	.28	.43
No. 6 Stranded.....	.27	.38	.53
No. 4 ".....	.52	.46	.71

NOTE: Above prices are based on quantities of 100 to 240 feet—Prices on smaller quantities are higher.
Prices on Park Cable above 600 V. are higher.



Installation time shortened . . . Service time lengthened

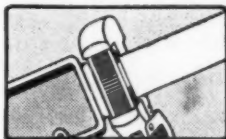
This complicated installation would have been almost impossible without Appleton No-Thread Unilets.



1. Loosen nut



2. Insert conduit



3. Tighten nut

LOOSEN the knurled nut . . . insert the conduit . . . tighten the nut . . . the job's done. Appleton No-Thread Malleable Unilets make the hardest jobs easy. Cramped quarters . . . tight corners . . . bent conduit . . . it makes no difference. They speed up any installation and save the expensive time of conduit threading.

Appleton No-Thread Unilets are economical, too, because they last so long. The malleable iron, of which they are made, with its cadmium coating, offers the greatest resistance to any kind of corrosion or constant vibration. They will last the life of the building.

Get all the facts on these remarkable time savers that are being used more and more every day. Tear out the coupon and mail it at once.

Appleton No-Thread Unilets are listed as Standard by Underwriter's Laboratories in 1/2-inch to 4-inch sizes, inclusive

SOLD THROUGH JOBBERS

APPLETON ELECTRIC COMPANY

1704 Wellington Ave., Chicago, U. S. A.

New York—150 Varick St.
Los Angeles—340 Azusa St.

San Francisco—655 Minna St.
Seattle—628 Railroad Ave.

APPLETON

No-Thread Malleable

UNILETS

Reg. U. S. Pat. Off.

The Original Threadless Conduit Fittings



APPLETON ELECTRIC COMPANY
1704 Wellington Avenue, Chicago

Gentlemen:

Please send us a copy of your new Bulletin 9-DA on Malleable No-Thread Unilets, together with prices.

Name

Address

City

State

THE contractor or merchant who, through ignorance of cost, sacrifices quality for price is bent on murder and suicide. Ruinous practices which kill competitors injure the public.

Disregard of merchandise and labor costs make for unhealthy business conditions. To depress a market by misdirected zeal and by disregarding costs of merchandise and labor is not "winning". The "winner" lays himself open to the doubtful privilege of no little blood-letting with consequent writing of his "winnings" in red. This is no vague theory; it is generally recognized. The contractor who bids without consideration of his labor and merchandise costs promotes loss to himself, his industry and his community.

Contractors are thinking the thing out. It is interesting to note that their reasoning brings them all in contact with one element—The Public.

Does The Public buy price or quality? Does The Public appreciate quality standards? These are some questions in the contractor's mind. The answers are not so hard to find.

Taking The Public apart we find only a group of *human* people. The very same people



Is there mercantile murder in *your city?*

Ruinous practices which kill competitors injure the public. The business man who bids without consideration of his labor and merchandise costs may be indulging in just such practice without even thinking that he is doing so. But contractors are coming to think the matter out more carefully and more deeply. There are signs that point that way.

one meets every day—people who buy heavily of radio, automobiles, moving picture entertainment—just to mention a few not indispensable things.

The Public will buy whether prices are high or low—provided prices are *fair* for the

value offered. Otherwise we would not have with us some of the mammoth industries of today. Contractors generally who have reasoned the thing out do not have to go further to see that The Public practically never refuses to pay full value for what it understands.

One Success Secret

Some contractors have made people understand the value of good electrical work and good electrical equipment. These men, by no long-distance coincidence, are the contractors with well established reputations and always-busy staffs,—those who thoroughly know their costs and their business.

To give all people a better understanding of good electrical work—this has been one of the aims of this Company as interpreted by its advertising for the last decade and in the quality of its products for the last half century.

No. 7 of a series dealing with the every-day problems of the electrifier.

GraybaR

Successor to Western Electric Supply Dept.



The Graybar Tag—
symbol of distribution

OFFICES IN 71 PRINCIPAL CITIES. EXECUTIVE OFFICES: GRAYBAR BUILDING, LEXINGTON AVENUE AND 43RD STREET, NEW YORK



NEW PRESIDENT WATERLOO ASSOCIATION:—K. C. Updegraff of the Hub Electric Co. was elected President of the Waterloo (Ia.) Association of Electrical Contractors last month. The Waterloo association consists of seven members: C. F. Nagle, Arthur Ford, Lee Taylor, William Walker, H. R. Plowman and the two officers, K. C. Updegraff, president and A. C. Sweetman, secretary. At their meeting on March 11, it was moved and adopted to use the Resale Price Section of ELECTRICAL CONTRACTING as a standard price guide.

Good Fellowship Meeting

The Northern Kentucky Electric Club and The Wadsworth Electric Manufacturing Co., Covington, Ky., had the Greater Cincinnati electrical contractors as their guests at the Wadsworth factory on March 25, at a good fellowship meeting and entertainment, which was arranged particularly in honor of Larry Coen, former secretary of the club, who has recently been appointed manager of the Cincinnati Electric Club.

* * *

Lorain Code Remains Unchanged

The controversy between the Lorain (Ohio) Insurance Association and the city council, resulting from the association's demand that the city electrical code be changed to conform to the National Electrical Code, was settled by the report of a special committee which recommended that the city code remain unchanged.

The principal point involved was the proposed change in grounding.

A-S-E
fuse-cabs

"the heart of the wiring system"

- new reversible panel—exclusive plaster adjustment
- increased width—more wiring space—plenty of knockouts—unit construction—easy to wire—indexed and numbered circuits—straight wiring—solid bus-bar assembly.

Write for your copy of bulletin F-8-C.

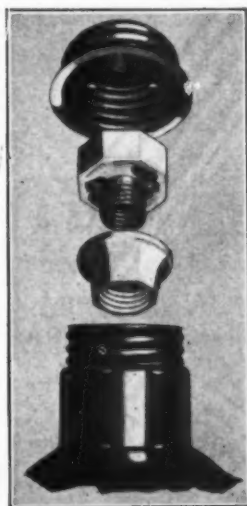
fuse-cabs • fuse-cabs • fuse-cabs

ALL-STEEL-EQUIP CO.
AURORA, ILL.



Boost Your Sales with ABolites

(Porcelain-Enameled Reflectors)



Easy to Wire. Everything Accessible. Interchangeable.

A COMPLETE LINE

Type X is made to fit all the usual industrial lighting needs for wide, concentrated or RLM illumination.

And, of course the 5 Big Points ALL ABolites have

RELIABILITY

Easy to Wire—Easy to Clean—Easy to Change

HERE's one of the latest ABolite trouble-savers from our new Catalog No. 180—and it's one that every one of your men will like, "right off the bat." It's the Type X Long-Necked Reflector Unit.

EASY TO INSTALL

Just unscrew the reflector, and the holder is completely accessible. The 2-part porcelain base makes wiring up still easier.



TYPE BXMK

Type BX Reflector with 4" Outlet Box Cover.

EASY TO CLEAN

The long-necked reflector is the only part to take down. Nothing to injure—it can be put right into the cleaning bucket if necessary.

EASY TO CHANGE

Being interchangeable with all the other ABolite Threaded Neck Reflectors, reflectors can be easily changed to suit changed lighting needs.

RELIABILITY



TYPE DXMK

Type DX Reflector With 4" Outlet Box Cover.

RELIABILITY



TYPE RXQM

Type RX Reflector with Q Type Pendant Holder.

If You have Catalog 180—See Pages 14 to 16
If You haven't—Write us to Send It

The ABolite Reflector Co.

2400 East 75th Street

Cleveland, Ohio

RELIABILITY

The city code is contrary to the National Code in that it forbids inside grounding unless the power company assumes responsibility for any trouble which might ensue. Because the Lorain code does not conform to the National Code, it is claimed the insurance rates on mercantile buildings are increased.

* * *

Utica Working on New Ordinance

The Utica Chapter of the Hudson-Mohawk Electric League is planning an industry meeting this month to discuss the proposed new ordinance based upon the Uniform Electric Ordinance being sponsored by the Society for Electrical Development. It is hoped to make this a part of the new Utica building code.

* * *

Five New Red Seal Leagues

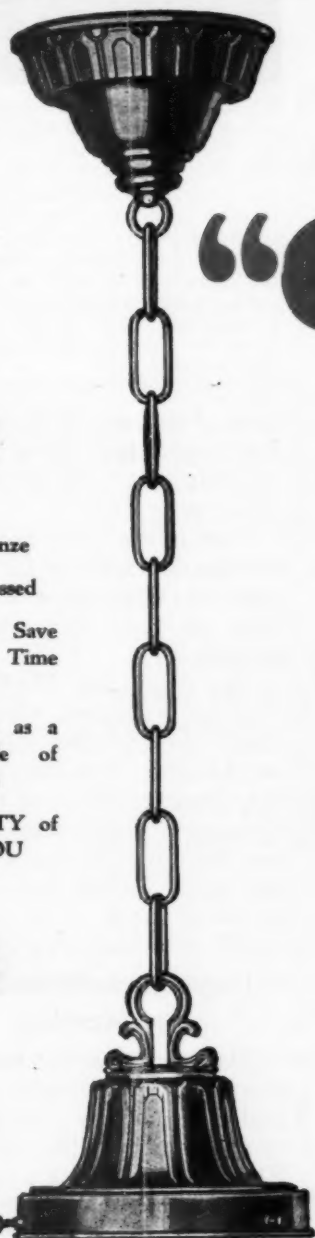
Five new districts totalling a population of approximately a half-million persons have been opened up as Red Seal territories since the first of the year. Licenses were granted by the Society for Electrical Development to leagues in the following cities



FINISHES UNUSUAL JOB FOR HUNGARIAN LEGATION—Joseph Kirschner, chairman, this year, of the Washington Electrical League, reports that his company, Biggs & Kirschner, Inc., have just finished wiring the new dining room of the Hungarian Legation in which there were installed two ceiling outlets with a total capacity of 4,500 watts, 202 100-watt cove outlets, 27 receptacles, 6 brackets, with crystal fixtures for ceiling and side walls.

Portrait of a Contractor

who specializes in
commercial lighting



Genuine Bronze

Richly Embossed

Designed to Save
Workmen's Time
in Installing

Priced Same as a
Good Grade of
Brass Fixture

With PLENTY of
Profit for YOU

"Gentlemen:

When I found out how EASY it is to lay out a good sized commercial lighting job, I began to specialize on that class of business, and now several builders give me all their work on specifications which I practically write myself. Of course I use a lot of 'Red Spot' material, especially

Wakefield BRONZE EMBOSSED HANGERS

The customer gets better value when he buys bronze, and I get a better price and profit."

Write for Bulletin 1900 on
Bronze Embossed "Red Spot" Hangers








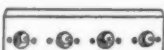


The F. W. Wakefield Brass Company
Vermilion, Ohio, U. S. A.

Theatre Managers Approve

BEL-SUN-LITE

And You Profit From It

Bring money to his box office and a theatre manager will approve anything within reason. Bel-Sun-Lites certainly bring money to the box office and they are priced so reasonably you can make plenty on them while still underbidding.

Bel-Sun-Lites are made for every theatrical purpose. Beginning at the door, changeable canopy letters  and floodlights  for advertising. In the foyer and auditorium, cove lights  for indirect illumination, exit lights  over doors, and louvre lights  for watching your step. On the stage, borderlights  shine from the flies. Olivettes  striplights  spotlights  from the wings, and of course, footlights  Besides, there are endless special attachments and fittings. Yes, Bel-Sun-Lite-ing a theatre gives hundreds of chances to profit.

Our distributor will gladly help you figure.
His name is in the classified phone book of the
nearest of these cities. Call him or write.

Atlanta, Ga.
Delaware, O.
Ft. Worth, Tex.
Gary, Ind.
Houston, Tex.
Indianapolis, Ind.

Kansas City, Mo.
Los Angeles, Cal.
Miami, Fla.
Minneapolis, Minn.
New Orleans, La.
Omaha, Neb.
Philadelphia, Pa.

St. Louis, Mo.
San Antonio, Tex.
San Francisco, Cal.
Seattle, Wash.
Tulsa, Okla.
Tampa, Fla.

Belson Manufacturing Co.

804 Sibley St., Chicago, Ill.



HEADS CONTRACTORS' SECTION OF BUFFALO LEAGUE:—Bill Hadler, former president of the Lighting Fixture Dealers Society of America, has been chosen chairman of the contractors' section of the Electric League of the Niagara Frontier. Mr. Hadler has had considerable experience in association work, both in the electrical industry and fraternal societies, and has already set up a strong working program for the contractor section to follow out this year.

since February 1 to operate the Red Seal Plan: Erie, Easton and Reading, Pa.; Decatur, Ill.; and Winnipeg, Canada.

This is regarded as a fine start for the year since for the entire year of 1928 there were only a total of eight new territories licensed.

The Manitoba Electrical Association, Winnipeg, received its license through the Electric Service League, Toronto, and already it is reported that one builder who constructs from one hundred to two hundred houses annually has agreed to install Red Seal wiring in all of them.

* * *

Inspectors Attend Motor Meeting

The heads of the municipal inspection departments of Boston and surrounding territory, were the guests of the Metropolitan Electrical League of Boston, March 21, to discuss the increasing use of fractional horse-power motors for domestic service.

What to Expect of Your **JOBBER'S SALESMAN**

You as a contractor, other things being equal, ordinarily favor the jobber's salesman who renders you the greatest amount of service, directly and indirectly. Such service may embody many things such as:

TO BE YOUR FRIEND in court (his house). Because you are his friend and his customer he should stand up for your rights.



TO BE ALERT at all times in following through on your rush orders, to see that delivery is prompt as possible—even to the extent of delivering minor items in a pinch himself.



TO BE A WALKING ENCYCLOPEDIA of knowledge, not gossip, about the things going on in your territory, which you will like to have called to your attention.



TO BRING YOU FIRST KNOWLEDGE of new products and devices that may be useful to you in your work and which you may have overlooked.



TO BE A FIELD MAN who quickly interprets to his house any changes in your needs brought on by special requirements in your territory.



TO KNOW HIS CATALOG and his line, so as to give you quickly and intelligently descriptions and prices on anything you may need—saving your time.



TO GIVE YOU TIPS on new business, and where his personal help would be of value, go with you to the prospective customer.

A jobber's salesman who qualifies with you along the lines above is a real asset to your business. Value him accordingly, and out of your own experience give him suggestions that will help him further to increase his efficiency as a salesman.

THE JOBBER'S SALESMAN

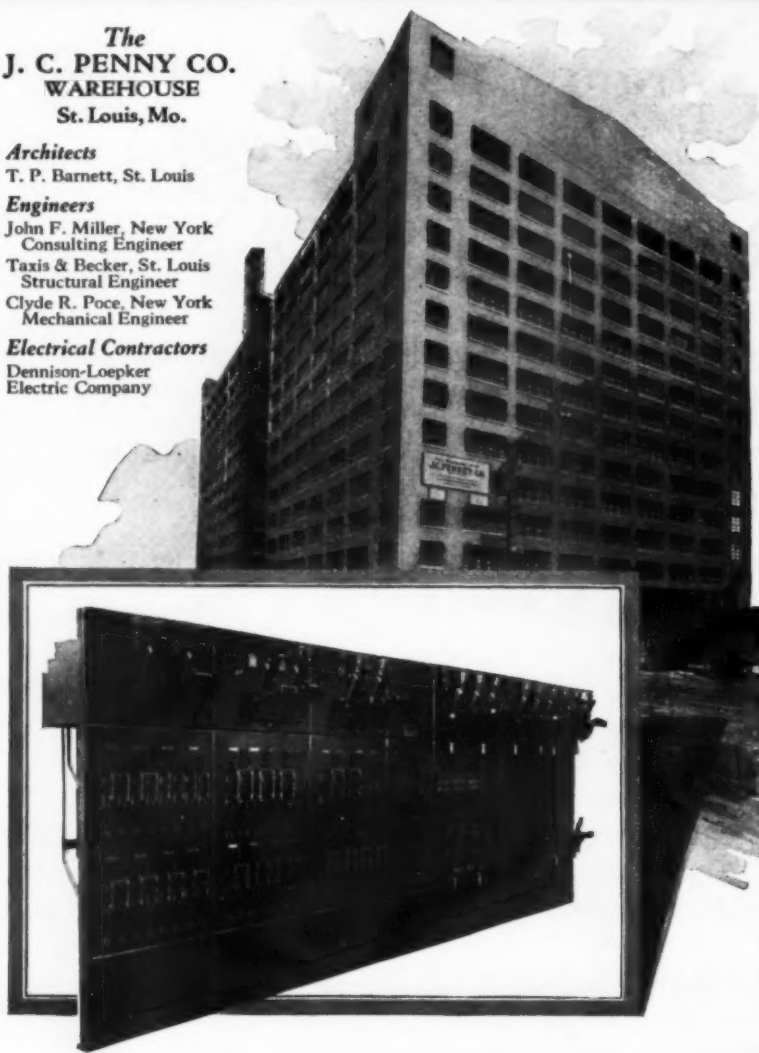
53 West Jackson Blvd., Chicago

THIS ADVERTISEMENT IS CONTRIBUTED BY THE ELECTRICAL TRADE PUBLISHING CO. IN THE INTEREST OF BETTER RELATIONSHIP BETWEEN CONTRACTORS AND JOBBERS

The
J. C. PENNY CO.
WAREHOUSE
St. Louis, Mo.

Architects

T. P. Barnett, St. Louis

EngineersJohn F. Miller, New York
Consulting EngineerTaxis & Becker, St. Louis
Structural EngineerClyde R. Poce, New York
Mechanical Engineer**Electrical Contractors**Dennison-Loepker
Electric Company

WURDACK SWITCHBOARDS

are especially designed to meet the requirements of each individual job. They are constructed, erected, completely assembled and electrically and mechanically tested in our plant before shipment. They are shipped in sections, each part being clearly marked, which permits the board to be re-erected and installed with the minimum of time and labor. No cutting or fitting of parts on the job.

Our engineering staff will be glad to co-operate with you in solving your live front switchboard problems. Our widespread experience in constructing hundreds of switchboards, such as the one for the J. C. Penny Company, illustrated above, is at your disposal. Write for details.

WMWURDACK
ELECTRIC MFG. CO.
4444 CLAYTON AVE., ST. LOUIS, MO.



OFFICERS OF NASHVILLE ASSOCIATION:—The newly formed Association of Electrical Contractors of Nashville, Tenn., elected E. J. Deaderick (left) of the Deaderick and Davis Electric Co., president for 1929. The other is G. F. Fulcher, of Fulcher Bros. Electric Co., who was made vice-president. They will have important announcements to make in the near future.

Tacoma Licenses Dealers

One of the interesting features of the 1929 Electrical Code of Tacoma, Wash., is the provision for licensing dealers in electrical supplies and apparatus.

Following in the lead of its neighbor, Portland, Ore., Tacoma requires that dealers in electrical equipment shall sell only approved equipment and that where such equipment is not labelled it may, if equivalent, be approved for sale locally. All sales of appliances of over 1,000-watt capacity have to be reported with the customer's name and address. License fee for dealers is \$1.00.

Other interesting features of this Code are as follows:

Owners may take out permits to do electrical work on their own premises. No inspection fees except where work is found to be defective.

Creation of board of appeals to reconsider decisions of inspectors. Each appeal to be accompanied by certified check for \$20.00, to be forfeited in case appeal is lost by contractor.

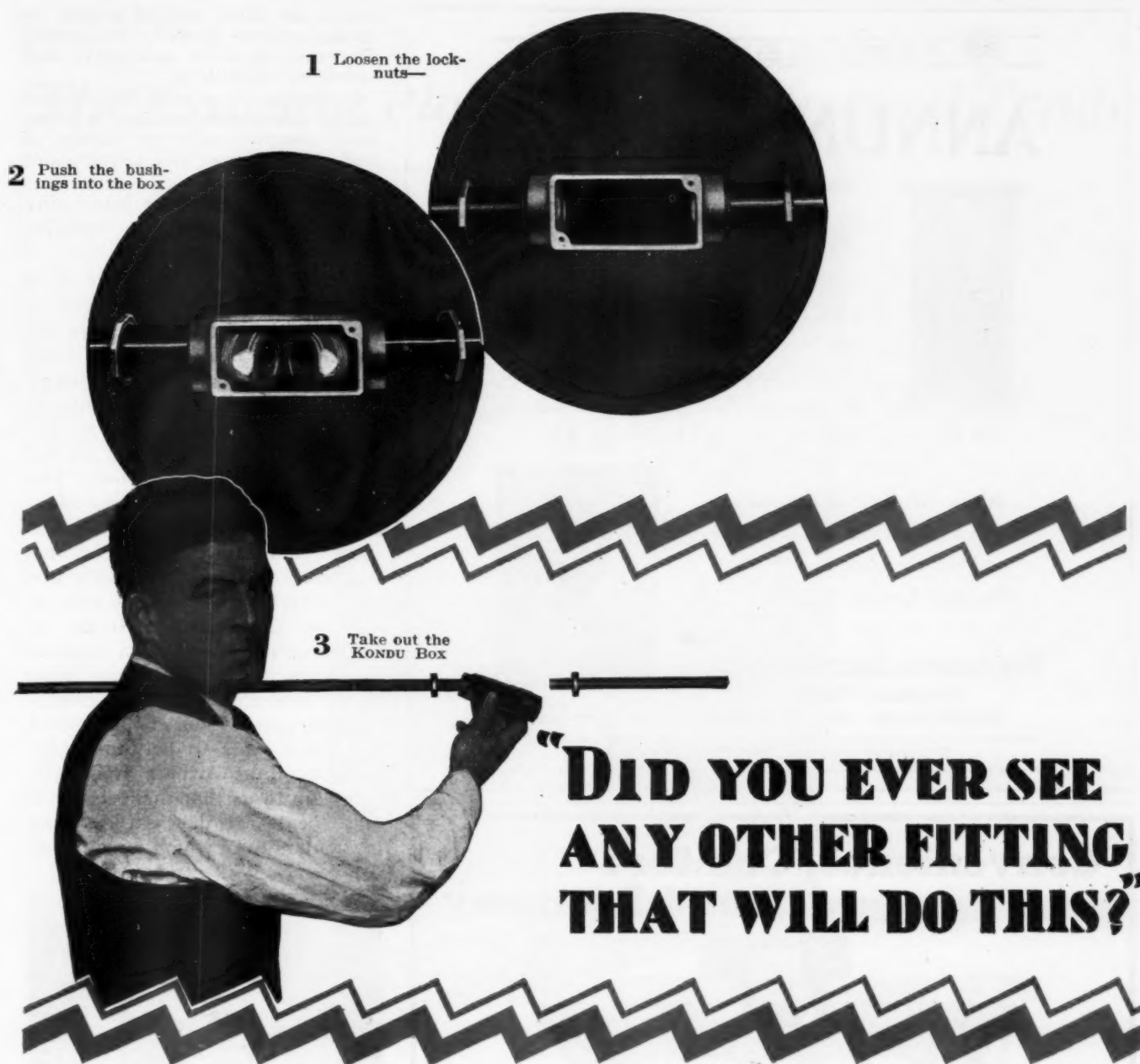
Diversity factors for one and two-family dwellings based upon number of circuits as follows:

1 to 5 circuits.....	100%
6 to 10 circuits.....	90%
11 to 15 circuits.....	80%
16 to 20 circuits.....	70%
21 to 30 circuits.....	60%
30 and over	50%

More rigid requirements for demand factors for range wiring as follows:

No. of Ranges	Demand Factor
1—3	100%
4—9	70%
10—12	60%
13—20	50%
Over 20	35%

Provisions for switches for all lights in bathrooms, kitchens, basements, toilets, outside porches, closets and where



"Neither did I! KONDU is the only fitting that can be taken out of the line separately, without disturbing any conduit."

When you talk to electrical maintenance men, they tell you that the KONDU Threadless Fitting is *in a class by itself* for saving time on changes in conduit lines — besides the savings made on new conduit installations.

And you can see at once why KONDU takes far less time to install —

The Simplest, Handiest Fitting

- (1) Just slide a lock-nut over each end of the

conduit, and slip the KONDU Box over the end. (2) Push the beaded bushings into place. (3) Give the lock-nut three or four turns — and KONDU is in place to *stay put*.

With KONDU, the savings in labor often *pay back the entire cost of the fittings several times over*.

Drop us a line for the KONDU Catalog, showing the *complete* line of threadless fittings.

ERIE MALLEABLE IRON COMPANY

Kondu Division 510 West 12th Street Erie, Pa.
Canadian Representative
 KONDU MANUFACTURING CO., LTD.,
 Preston, Ont.

**FIRST IN THE FIELD
 OF
 THREADLESS FITTINGS—**

KONDU

**CAN BE TAKEN
 OUT OF THE LINE
 ANYWHERE
 AT ANYTIME**



ANNUNCIATORS



No. 303

The Ansonia line of Annunciators offers a variety to fit every conceivable demand. For houses, hotels, offices, elevators, etc. They offer mechanical and electrical perfection which only can be obtained by years of specialized manufacturing experience. These may be obtained through any electrical jobber.

Write for 64-page catalog E which illustrates annunciators and our complete line of other electrical house goods.

THE ANSONIA ELECTRICAL CO.
ANSONIA, CONN.

ANNUNCIATORS — BELLS — BUZZERS — PUSH BUTTONS

ELECTRICAL HOUSE GOODS



sockets are within 6 ft. of ground, including concrete floors on the ground. The roughing in for such lights shall include switch outlets.

Service pipe and main line cabinet for all commercial buildings is to be large enough to allow an increase of load of 50 per cent over contemplated installation.

In addition to these interesting requirements, the Code contains the following paragraph:

"The electrical inspector does not propose to act as arbitrator in disputes that may arise after the contract has been let or the work started. To insure a satisfactory installation, the plans and specifications should be drawn up so that electrical contractors may all bid on the same grade of work. The mere statement in the specifications that the electrical installation must conform to the National Electrical Code requirements and that a certificate from the city inspection department will be accepted as evidence that a contract has been fulfilled, does not mean that a modern and efficient electrical equipment will be installed. We desire this to be thoroughly understood as owners frequently complain to us that their electrical equipments are deficient in many particulars over which we have no control."

Convenience, Comfort and Economy



The Levolver Twi-Lite Pull Switch

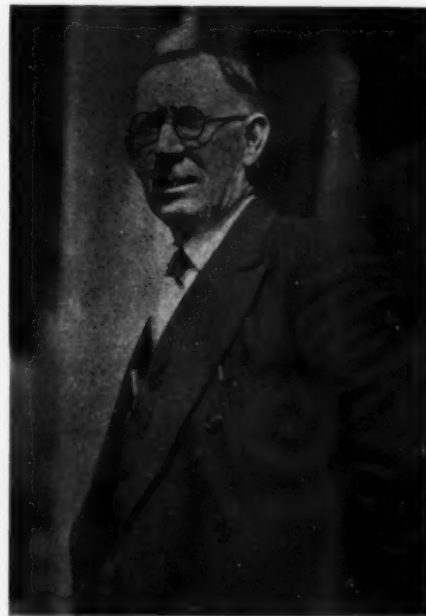
Easily installed in ceiling fixtures and adds to their usefulness and saleability. The

DIM — BRIGHT — OFF

feature gives a new degree of convenience, comfort and economy. Dim light provides one-seventh the light and consumes but one-third the current. Ideal for the sickroom, nursery, bedroom, hall or wherever a subdued light is desirable.

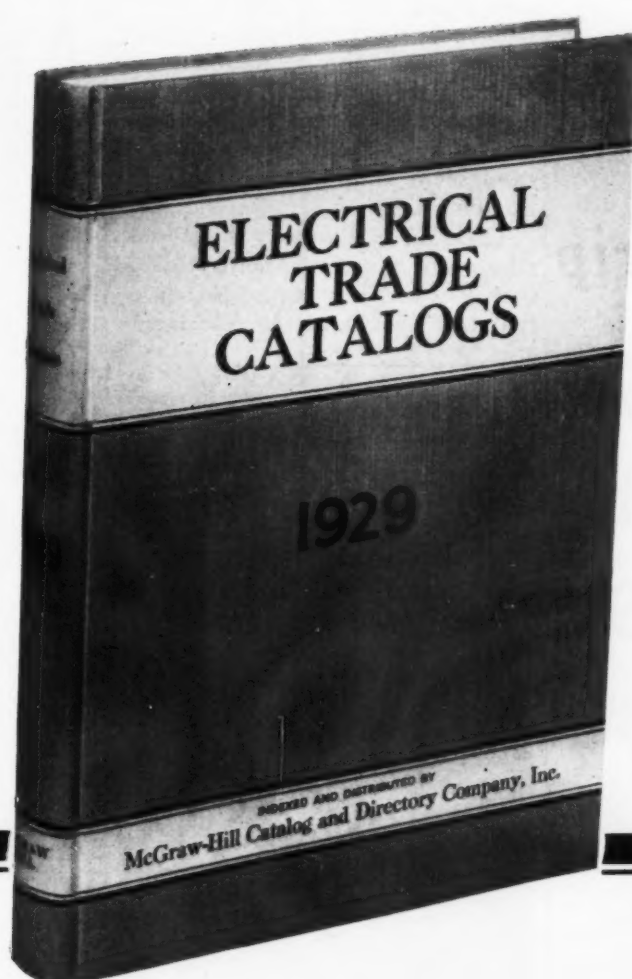
Your jobber can supply you. Meanwhile, write us for a sample.

McGill Mfg. Company — — Valparaiso, Ind.



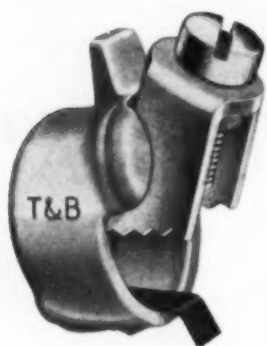
GETS WIRING CONTRACTS ON PUBLIC INSTITUTIONS—John B. (Jack) Mullen, head of Mullen Electric Co., Nashville, Tenn., reports that business is good. His firm is making wiring changes and extensions at the Central Hospital for the Insane and the Davidson County Workhouse.

The Catalog Place of the Electrical Trade



Look it up in this Binder!

The Green Book with the Orange Bands — whenever you need information on what or where to buy!



The Tite-Bite-Grip a new feature of the T&B A-1S 3/8 Box-Connector

with a Double
Ground

TABOLITE
finish SUPERIOR GALVANIZING

The teeth embodied in the A-1S Connector holds the Cable in a Tite-Bite grip that overlaps the spirals of the Cable and CANNOT ENTER BETWEEN THE CONVOLUTIONS OR SPREAD THE ARMOR.

Neither vibration nor jolts can budge the Cable.

The new A-1S Connector FORMS A DOUBLE GROUND—a Direct Ground formed by the Cable Sheath being bonded against the bare edge of the Knockout hole and an Indirect Ground through the Connector to the Box Wall.

**THE COUPON BRINGS
YOU A SAMPLE—SEND IT
NOW.**

Mail this Coupon

The Thomas & Betts Co.
15 Park Place, New York.

Send a sample connector with Tite-Bite Grip and TaBolite finish, also sample No. 90 Cable clips for flexible conduit.

Name
Address
City State

Light's Golden Jubilee

As October 1, 1929, marks the fiftieth anniversary of Thomas A. Edison's invention of the first practical incandescent lamp as well as 50 years of lighting and electrical progress, extensive plans are now being made to make Light's Golden Jubilee, not only an illuminating exposition of national and international interest and importance, but a brilliant tribute to the inventor of the first practical incandescent lamp—Thomas Alva Edison.

The Edison Pioneers, those men who were associated with Edison in his pioneering days, presented tentative outline of the celebration



MANAGER DETROIT ELECTRICAL CONTRACTORS—C. C. Cadwallader, who was elected Secretary-Manager of the Detroit Chapter of the Association of Electragists on December 1, 1928, has been in the electrical field for thirty years. From 1901 to 1903 he was superintendent of construction for the American Trading & Construction Co., New York. Later he was called to Ohio, then to West Virginia, to Montreal, Canada, and finally settled in Detroit where he went into the contracting business in 1919 under the firm name of Hub Electric Co. He remained as president of that company until 1926 when he joined the staff of the Detroit Electragists. He is also a member of the wiring rules and code committee of the Detroit Electrical Extension Bureau, of which organization he was formerly treasurer. For a number of years he was president of the Detroit Electrical Estimators Club.




This Hanger Fits 80% of Installations

The design of this hanger makes it sell to every builder. At the price there is not as handsome a hanger on the market. The nine inch cast ring makes it look much larger than the six inches it really is. Canopy six inches in diameter with knockout for pull switch, the fixture is wired with porcelain socket and number sixteen asbestos covered wire. This hanger is certainly a money maker; only one month on the market and sales exceeding all expectations.

Send for Catalog

We will send you free a book of other money makers. Just write your name and address on a postcard and mail it today.

"HANGER SPECIALISTS"

The Art Metal Co.
1800 E. 38th St.
CLEVELAND, O.





The 261 Fifth Ave. Building, where the conduit is permanently protected with Youngstown Buckeye Conduit.

ARCHITECTS,
Buchman & Kahn.
GENERAL CON-
TRACTOR,
Starret Bros.
ELECTRICAL
CONTRACTOR,
J. Livingstone & Co.
ELEVATOR CON-
TRACTOR,
A. B. See Electric
Elevator Co.
PLUMBING CON-
TRACTOR,
W. G. Cornell Co.

Its Service is Measured by Decades

DISTRICT SALES OFFICES

ATLANTA—Healey Bldg.
BOSTON—80 Federal St.
BUFFALO—Liberty Bank Bldg.
CHICAGO—Conway Bldg.
CINCINNATI—Union Trust Bldg.
CLEVELAND—Union Trust Bldg.
DALLAS—Magnolia Bldg.
DENVER—Continental Oil Bldg.
DETROIT—Fisher Bldg.
KANSAS CITY, MO.—Commerce Bldg.
MINNEAPOLIS—Andrus Bldg.
NEW ORLEANS—Hibernia Bldg.
NEW YORK—30 Church St.
PHILADELPHIA—Franklin Trust Bldg.
PITTSBURGH—Oliver Bldg.
SAN FRANCISCO—55 New Montgomery St.
SAVANNAH—M and M T Terminals
SEATTLE—Central Bldg.
ST. LOUIS—Shell Bldg., 13th and Locust Sts.
YOUNGSTOWN—Stambaugh Bldg.
LONDON REPRESENTATIVE
The Youngstown Steel Products Co.,
Dashwood House, Old Broad St.,
London, E. C. England

YOUNGSTOWN Buckeye Conduit affords the same unfailing protection to electrical wiring today, tomorrow, and for years to come. It is the soundest assurance of an electrical installation as lasting as the building itself—as proved by the service records of thousands of buildings.

Youngstown Buckeye Conduit is made of the finest grade of steel—tough and rigid, yet easy to bend without splitting at the seam; it is finished with a durable electro-galvanized or enamel coating which will not chip or crack upon bending; and it threads easily.

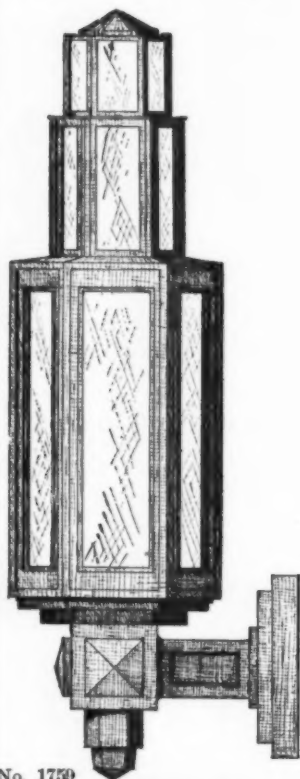
Electrical contractors, electrical engineers and architects prefer Youngstown Buckeye Conduit because of the permanent protection it affords, and because it makes a good job better.

THE YOUNGSTOWN SHEET AND TUBE COMPANY

One of the oldest manufacturers of copper-bearing steel, under the well-known and established trade name "Copperoid"
General Offices—YOUNGSTOWN, OHIO

YOUNGSTOWN BUCKEYE CONDUIT

MURLIN



No. 1759

Modern Lanterns

ATRACTIVELY developed in Cast Iron and Cast Bronze. One of many rich designs in the Murlin Catalog. May we send you a copy?

MURLIN
Manufacturing Co.
5420 Paschall Avenue
Philadelphia, Pa.



A National Organization

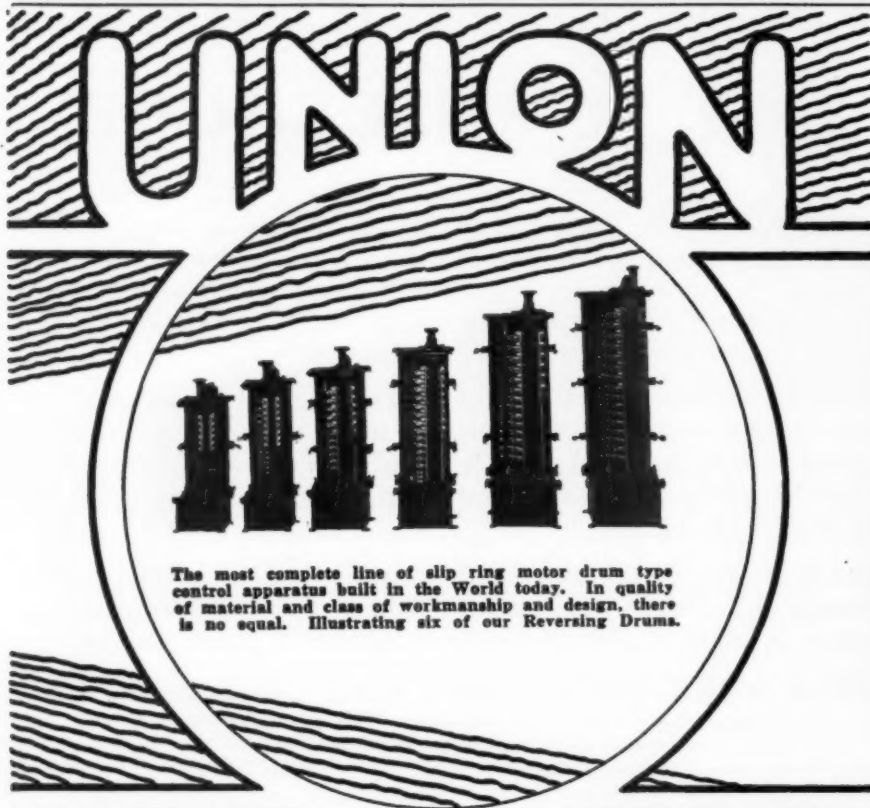
on Mr. Edison's 82nd birthday, which was unanimously approved. General plans are being made for a series of events leading to a climax on October 21, "The Night of Light," the fiftieth anniversary of the incandescent lamp.

Among the supporters of the jubilee are Henry Ford and other close personal friends of Thomas Edison, as well as the Edison Pioneers. Henry Ford's plans in connection with the jubilee will be announced at a later date.

* * *

Oklahoma City Proposes Examining Board

An ordinance has been proposed by Oklahoma City to provide for a Board of Electrical Examiners, to be composed of "the Building Superintendent, an electrical inspector employed by the Building Department, the Chief of the Fire Department and two other persons who shall be appointed by the City Manager for a period of one year, or until their successors are duly appointed and qualified, unless sooner removed for cause; one of whom shall be an electrical contractor and one a journeyman electrician, each of whom shall have been actively engaged in such business for at least five years next preceding the date of his appointment."



The most complete line of slip ring motor drum type control apparatus built in the World today. In quality of material and class of workmanship and design, there is no equal. Illustrating six of our Reversing Drums.

UNION ELECTRIC MANUFACTURING CO.

MILWAUKEE, WISCONSIN

Associated Manufacturer with, and Eastern Distributor for

DIAMOND  ELECTRICAL MFG. CO., LOS ANGELES, CAL.



SECURES FIXTURE BUSINESS WITH WIRING JOBS—J. T. Shannon, Electric Equipment Co., Nashville, Tenn., sells the fixtures for almost every house he wires by going over the premises with the customer long before the usual time of talking fixtures. His list of completed jobs includes some of the best homes in the city.

HARRY
F.
HARTMAN



A
SUCCESSFUL
CONTRACTOR

Read How He Makes Money

DISTRIBUTORS OF
TUBA ELECTRIC MACHINES
COPLAND ELECTRIC REFRIGERATORS
WINDMILL BEST INSULATORS
HENDERSON ELECTRIC CABLES

**HARTMAN ELECTRIC
CONSTRUCTION CO.**
500-502 LACKAWANNA AVENUE
SCRANTON, PA.

April 24th,
1928

Henderson-Hazel Corporation,
Euclid Avenue,
Cleveland, Ohio.,

GENTLEMEN:-

I thought you would be interested to know that we have been using your service now over a year and that as a result of using this resale price book and other careful methods, our report for last year shows that we did less business than the year previous, but made a net profit double what it was the year before.

If the thousands of contractors and dealers realized how important this price book of yours is, they would not hesitate to pay the small cost of the service.

With very best wishes for your success, we are

Yours very truly,
HARTMAN ELECTRIC CONST. CO.,
Per: *Harry Hartman*

HFH:SH:-

over 1000 others

are doing their pricing and quoting from the NATIONAL ELECTRICAL RESALE PRICE SERVICE. They pay us \$5.00 per month to watch over the most important part of their business. This personal Service with price change sheets coming along each week is adding from \$20.00 to \$200.00 per month to their net profits. In other words it is an investment paying big dividends.

costs nothing

to investigate. Full information will be gladly sent you by mail and no high-pressure salesmanship will be used but if you are interested in better profits, we would suggest that you fill in the coupon and please attach your letter-head as the Service is furnished only to those engaged in the electrical business.

Henderson-
Hazel Corpo-
ration,
5005 Euclid Avenue
Cleveland, Ohio

Please send us full in-
formation about your
NATIONAL ELECTRICAL
RESALE PRICE SERVICE.

HENDERSON-HAZEL CORPORATION

(National Electrical Resale Price Service)

5005 Euclid Ave., Cleveland

In Canada

Henderson Business Service Ltd., Brantford

Name.....

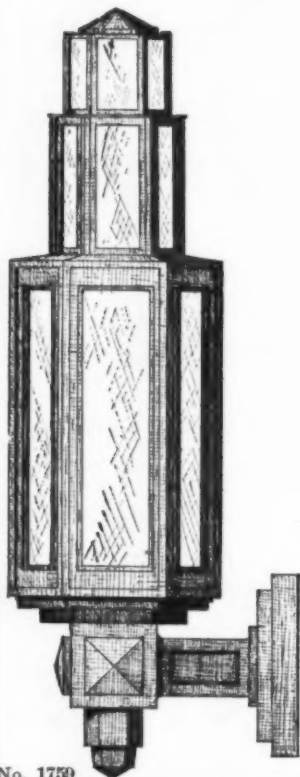
Address.....

City.....

State.....

EC-4-29

MURLIN



No. 1759

Modern Lanterns

ATRACTIVELY developed in Cast Iron and Cast Bronze. One of many rich designs in the Murlin Catalog. May we send you a copy?

MURLIN
Manufacturing Co.
5420 Paschall Avenue
Philadelphia, Pa.



A National Organization

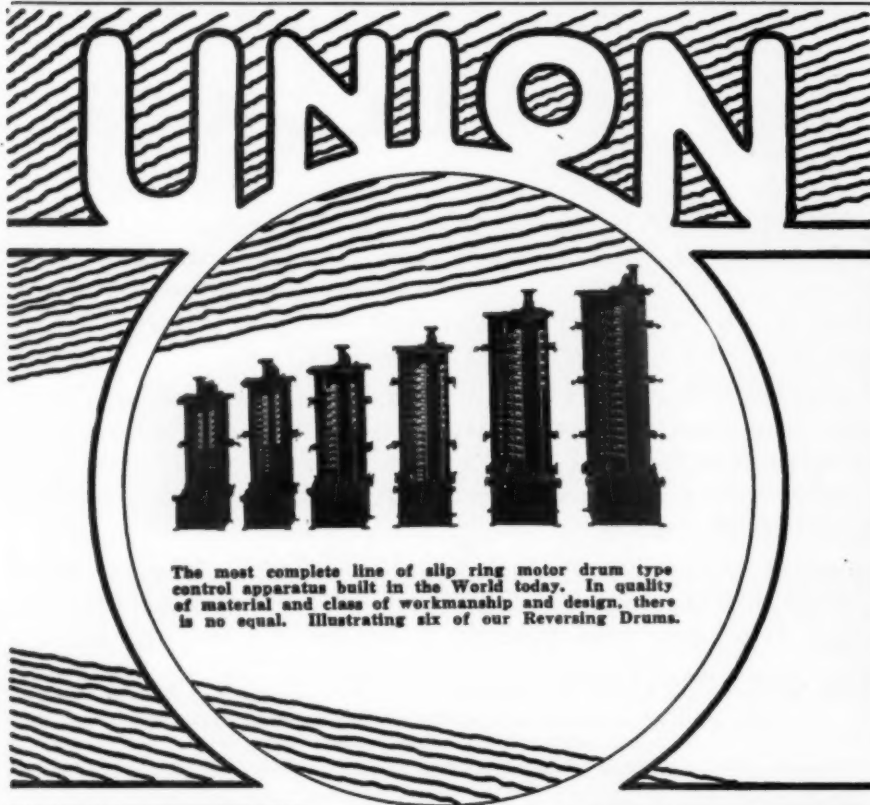
on Mr. Edison's 82nd birthday, which was unanimously approved. General plans are being made for a series of events leading to a climax on October 21, "The Night of Light," the fiftieth anniversary of the incandescent lamp.

Among the supporters of the jubilee are Henry Ford and other close personal friends of Thomas Edison, as well as the Edison Pioneers. Henry Ford's plans in connection with the jubilee will be announced at a later date.

* * *

Oklahoma City Proposes Examining Board

An ordinance has been proposed by Oklahoma City to provide for a Board of Electrical Examiners, to be composed of "the Building Superintendent, an electrical inspector employed by the Building Department, the Chief of the Fire Department and two other persons who shall be appointed by the City Manager for a period of one year, or until their successors are duly appointed and qualified, unless sooner removed for cause; one of whom shall be an electrical contractor and one a journeyman electrician, each of whom shall have been actively engaged in such business for at least five years next preceding the date of his appointment."



The most complete line of slip ring motor drum type control apparatus built in the World today. In quality of material and class of workmanship and design, there is no equal. Illustrating six of our Reversing Drums.

UNION ELECTRIC MANUFACTURING CO.
MILWAUKEE, WISCONSIN

Associated Manufacturer with, and Eastern Distributor for

DIAMOND  ELECTRICAL MFG. CO., LOS ANGELES, CAL.



SECURES FIXTURE BUSINESS WITH WIRING JOBS—J. T. Shannon, Electric Equipment Co., Nashville, Tenn., sells the fixtures for almost every house he wires by going over the premises with the customer long before the usual time of talking fixtures. His list of completed jobs includes some of the best homes in the city.

HARRY
F.
HARTMAN



A
SUCCESSFUL
CONTRACTOR

Read How He Makes Money

DISTRIBUTORS OF
TUBES, ELECTRIC WASHERS
COPPER AND BRASS REFRIGERATORS
WATERPROOFING HEAT RESISTANT
HOUSEHOLD ELECTRIC CLEANERS

**HARTMAN ELECTRIC
CONSTRUCTION Co.**
500-502 LACKAWANNA AVENUE
SCRANTON, PA.

April 24th,
1928

Henderson-Hazel Corporation,
Euclid Avenue,
Cleveland, Ohio.,

GENTLEMEN:-

I thought you would be interested to know that we have been using your service now over a year and that as a result of using this resale price book and other careful methods, our report for last year shows that we did less business than the year previous, but made a net profit double what it was the year before.

If the thousands of contractors and dealers realized how important this price book of yours is, they would not hesitate to pay the small cost of the service.

With very best wishes for your success, we are

Yours very truly,
HARTMAN ELECTRIC CONST. CO.,
Per *Harry F. Hartman*

HFH:SH:-

over 1000 others

are doing their pricing and quoting from the NATIONAL ELECTRICAL RESALE PRICE SERVICE. They pay us \$5.00 per month to watch over the most important part of their business. This personal Service with price change sheets coming along each week is adding from \$20.00 to \$200.00 per month to their net profits. In other words it is an investment paying big dividends.

costs nothing

to investigate. Full information will be gladly sent you by mail and no high-pressure salesmanship will be used but if you are interested in better profits, we would suggest that you fill in the coupon and please attach your letter-head as the Service is furnished only to those engaged in the electrical business.

Henderson-
Hazel Corpo-
ration,
5005 Euclid Avenue
Cleveland, Ohio

Please send us full in-
formation about your
NATIONAL ELECTRICAL
RESALE PRICE SERVICE.

HENDERSON-HAZEL CORPORATION

(National Electrical Resale Price Service)

5005 Euclid Ave., Cleveland

In Canada

Henderson Business Service Ltd., Brantford

Name-----

Address-----

City-----

State-----

EC-4-29



Put In a PENN PANEL

and make more money from a good discount and lower labor expense. Penn panels are extremely easy to wire. Roomy gutters, free-working connections, accurately fitted parts make installation quick. Solid construction and handsome finish, please your customer; get you the next job without trouble.

Write our nearest distributor, who will give you any help you require to select exactly the right Penn panel to make most money in least time.

Harry W. Wright
Room 305, 38 Park Row
New York City

J. E. Perkins Co.
11 E. Center St.
Baltimore, Md.

R. R. Mathias
Box 37, Station D
Cincinnati, Ohio

F. S. Lewis
618 Real Estate
Trust Bldg.
Philadelphia, Pa.

C. O. Baird
704 Union Title Bldg.
Indianapolis, Ind.

James L. Thompson
1528 S. Union Ave.
Alliance, Ohio

PENN
Electrical
Company
IRWIN, PA.

Coupon Brings Free Book

Penn Electrical Co., Irwin, Pa.
Please send me free your catalog of electrical material.

Name.....

Address.....

City.....State.....

429

Airport Development Going Strong

That the public is becoming more and more air-minded is evidenced by the fact that there are now 1,000 airports in various stages of actual development throughout the U. S. and approximately 1,000 more are under committee consideration.

It is estimated that \$300,000,000 will be spent during the next twelve months for the construction and development of airports, a fair portion of which will be spent for wiring and lighting.

* * *

Use Price Service as Standard

The Waterloo (Ia.) Association of Electrical Contractors has voted to use the ELECTRICAL CONTRACTING'S Resale Price Service as the standard price guide.

New London Wants Ordinance

At a public hearing of the proposed electrical ordinance for New London, Conn., which was held in the City Hall early in March, the citizens unanimously agreed there was need for a safety measure, but disagreed on the question of including the fee system in the ordinance. Another meeting date was set for further discussion and analysis of the proposed ordinance.

* * *

Eighty Miles of Wire to Protect Vaults

More than eighty miles of electric wiring was embedded near the surface of the walls, top and floor of the vaults of New York Life Insurance Company's new building on the site of old Madison Square Garden, New York City, for the operation of an alarm system. This new form of vault protection was developed recently in consultation with officers and engineers of the United States Treasury and the New York Federal Reserve Bank, and is being rapidly adopted by many of the larger institutions throughout the country. A closed circuit system upon being opened,

300

units of
PROFIT



from this handy
KIT - - -

A dead motor—you're called to shoot the trouble—and in a few minutes you have that motor back on the job pulling its load—thanks to the handy little OHIO Brush Kit No. 36. This Kit will service over 300 types of single phase motors. Every brush is numbered according to type. Each type of brush is in a separate compartment, and a concise, simplified chart immediately tells you the exact type of brush to use. And all this in a kit that you can easily carry under your arm.

Send for this Kit. It gives you an immediate source of supply—no delays—no confusion.

Ohio Carbon Kit No. 35

Price \$25.00

THE OHIO CARBON CO.

8217 Almira Avenue
CLEVELAND, OHIO

West of the Rockies:
1066 Howard St., San Francisco, Calif.

"From Raw Material to Finished Product"

No second "dips" with G-E soldering paste

VARNISHES

STICKERS

OILS

PAINTS

FIBERS

TWINES

COMPOUNDS

TAPES

CORDS

SHELLACS

CLOTHS

TUBING

PAPERS



NO second "dips" are necessary with G-E soldering paste. It takes hold the first time. It works thoroughly and fast. You use less, yet the results are better. G-E soldering paste can be used for any metal except aluminum. It resists corrosion and is uniformly dependable.

For tinning, electrical repair and construction work, and for a multitude of other contracting jobs, there is no better soldering paste than that manufactured by General Electric. Moreover, contractors will find it as easy to sell as to apply.

Better look into the matter further; you can do it without obligating yourself. When you have filled out and mailed the coupon just below, you will receive a complete catalog of G-E insulating materials, many of which are equally valuable to the contractor who uses and sells only products of recognized quality.

800-502

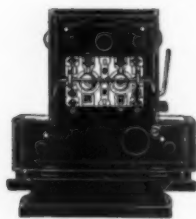
GENERAL ELECTRIC

Section 1-223,
Merchandise Department,
General Electric Company,
Bridgeport, Conn.

Gentlemen:

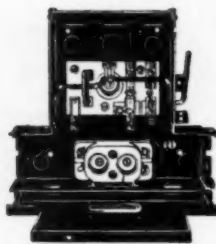
Kindly send me a copy of the G-E Insulating Materials Catalog.

PROFITS ARE ASSURED BECAUSE



No. 142
Sealed Fuse Type
No Branch Circuits
2 Wire Live Fuse

Wadsworth
Channel Banking
Type Switches
Cut Installation
Cost to a Minimum



No. 362
Sealed Main Fuse Type
With 2 Branch Circuits
in same cabinet

and

Assure a Neat, Safe, Speedy Installation. Get this Point: No Conduit, Lock Nuts, Nipples, or Bushings Needed, and no separate troughs or lids between switches.

SPECIAL NOTE—60 Amp. Meter Test Type Switches may be banked alone, or in connection with 30 Amp. Channel Banking Type Switches by using our New E.Z. Wiring Channel No. 15, giving 15-inch centers.

The WADSWORTH ELECTRIC MFG. CO. INC.

Covington, Kentucky.

For Full Description write for Bulletin No. 352



Fretz-Moon

Fretz-Moon Tube Co.
Butler, Pa.

Our exclusive methods of
manufacture insure you
conduit of highest quality



RIGID CONDUIT

operates a powerful siren which is enclosed in an electrically protected, 800-lb. steel cabinet located on the outside of the building, and also a gong in the central watch office.

* * *

**Kansas City Contractors
\$4,000,000 in 1928**

Figures just compiled show that 100 electrical contractors took out 5,640 permits in Kansas City, Mo., in 1928, paying the city in permit fees \$13,958. In addition 24 industrials took out 375 permits and 7 fixture houses 1,099 permits.

Based upon these figures, the local contractors have estimated that the total volume of electrical contracting business in Kansas City in 1928 ran close to \$4,000,000.

Kansas City now has 120 licensed electrical contractors: 55 Class A; 57 Class B and 8 Class C.

TAMPA MORNING TRIBUNE, FRIDAY, FEBRUARY 14, 1929

We Give
A FREE PHOTO
of Yourself or One of Your Family
This February—With Any Purchase
of \$10 or Over

See in our Display Window an Array of Sample Photos by one of the Best Tampa Artists, size 5x7, on special De Luxe Mounting.

This Sumptuous Gift of an Order for a FREE PHOTO includes the February Sale of the

**WESTINGHOUSE
WAFFLE IRON**

Regular Price \$12.50	February Price \$9.95
---------------------------------	---------------------------------

Special Terms: \$1.95 cash, \$2 per month with Electric bills.

Also, These
FREE Premiums

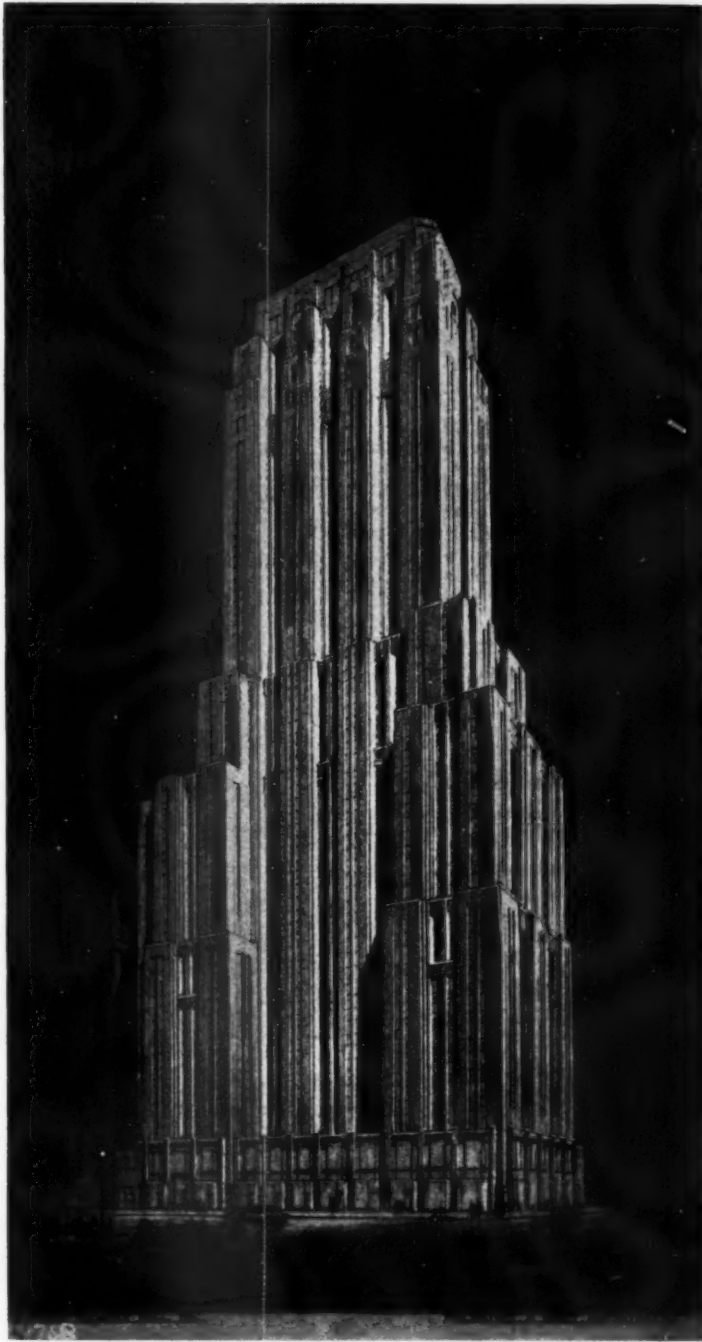
- 1 Butter Pitcher and 1 Syrup Pitcher, Non-tinted glass.
- 1 can of Alga Syrup.
- 1 can of Obalok Flour for the 1 can of Wesson Oil makings

Surely seize this February chance of joyous breakfasts, reduced prices, free premiums, together with the amazing offer of a splendid photo of yourself or one of your family.

Ask your District Representative

TAMPA ELECTRIC COMPANY
H. I. Buxen, Jr.
Sales Manager

CONTRACTOR-DEALER GOAT GETTER:—A remarkable example of lagniappe by a central station—cut price, special terms and five free premiums.



PALMOLIVE BUILDING

NORTH MICHIGAN AVENUE
CHICAGO



A magnificent example of modern architectural conception; and to give it unusual beautiful exterior, unexcelled interior arrangement and appointments, and unquestionable permanency, the best materials were installed by the best mechanics. That's why

GALVAKOTE

was used throughout this building



The high grade materials and workmanship used in production of **GALVAKOTE** and **ENAMELKOTE** give these brands of rigid conduit pipe **LOW COST TO INSTALL** reputation.



HOLABIRD & ROOT, Architects
Chicago

LUNDOFF-BICKNELL CO., Builder
Chicago

HATFIELD ELECTRIC CO., Elec'l Contractor
Chicago

CLAYTON MARK & COMPANY

CHICAGO

Manufacturers of
GALVAKOTE and ENAMELKOTE
SUPER-QUALITY RIGID CONDUIT PIPE

SHERMAN

Connector Headquarters
for U. S. A.



Sherman Fixture Connectors

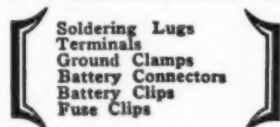
The use of the Sherman Fixture Connector is the most approved and efficient method of making small electrical connections. Time is money, consequently soldered joints are expensive. Only one size—takes all sizes of wire—recommended by your inspector.

Sherman Extension Connectors

The Sherman Extension Connector is a combination of two Sherman Fixture Connectors in a handsome insulating case. Takes any kind of wire, stranded or solid, and no special preparation of wire ends, such as soldered tips, is needed.

SOLD THRU JOBBERS

ALSO MANUFACTURERS OF



H. B. SHERMAN MFG. CO.
Battle Creek, Michigan



DESIGNS LARGE SWITCHBOARD:—Wm. A. J. Guscott, electrician in Denver, Colo., is seen here with the switchboard in West High School, Denver. The board, which he designed himself and had built in his own city, is a combination light and power affair. It has a 1500 amp. circuit-breaker on the light circuit and an 800 amp. 3-pole switch on the 3-phase power circuit, which totals 275 H. P.

Labor Costs the Same for Concentric Wiring

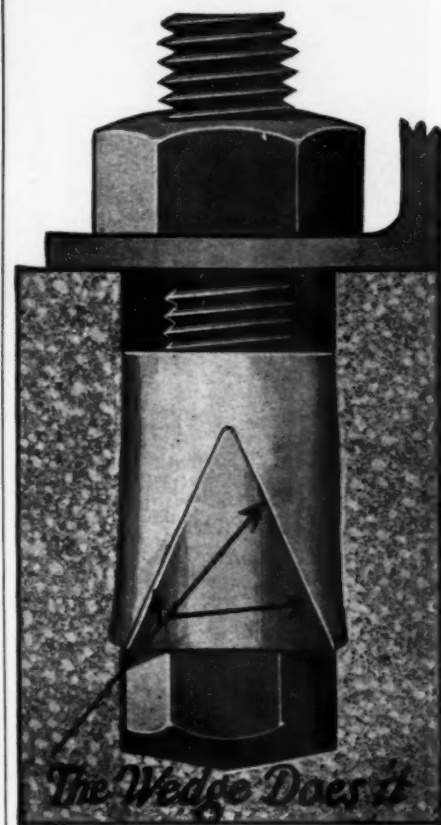
A letter recently received in this country from Donald Smeaton Munro, one of Great Britain's recognized authorities on wiring, states that in his experience there is no reduction in labor costs for installing concentric wiring, but a considerable increased risk of break-down. That portion of the letter which refers to this system follows:

"My father took out what I believe to be the first patent for concentric wiring in 1883 and I also designed a concentric system with an outer covering of tough rubber a good many years ago. I mention this to show that I might be expected to have at least a sentimental interest in advocating that system of wiring.

"In spite of that, however, I would say that my experience is that the concentric wiring system is not one which should be generally adopted or even permitted on all the complicated varying conditions of general supply. The system, if given official sanction, might afford a passing opportunity for one or two manufacturing firms to specialize in the joint boxes, bonds, bridging pieces, etc., etc., but the general advantages of the system are more apparent than real and any vogue would I fear be temporary.

"In the early days of wiring development there was a greater

E-Z Bolt Anchors Can't Pull Out



These labor and money saving bolt anchors should be a part of every electrical contractor's stock. They are ideal for fastening motors, signs, boxes, pipe hangers, signal lights, brackets, railings, etc.

E-Z Bolt Anchors

Assure Easier Installations

Anchorage made before work applied. Save time, work and, of course, money.

Less depth to drill—cuts labor costs. Only 1 lead and 1 iron part to install. Vibration only increases the anchor's grip.

Clip coupon now
so we can send free sample

Name _____
Address _____
City _____
State _____
Kempton Mfg. Corp.
148 West 23rd Street
New York City E. C. 4

proportion of concentric installations and the idea was consistently carried throughout all the fittings, flexible cords, lampholders, sockets and switches. That would be difficult to do nowadays. In ships, of course, the system was quite popular for a number of years and even there, where the conditions were very suitable, it is practically obsolete.

"The very close proximity of the two conductors is a disadvantage and one is dependent on a single layer of insulation only which is always under electrical stress. There are also mechanical stresses which tend to break down the insulation at bends and there is unequal expansion of the inner and outer conductors. The outer conductor has got to be interrupted and therefore bonded again at every point where access is required to the live wire and there are awkward complications whenever one requires to control say an ordinary fitting from say two or more points.

British Systems

"The most suitable readily available cable which is used in Britain for concentric work is known under the trade name of "Stannos" and is made by Messrs. Siemens Brothers & Co. of Woolwich, London, S. E. 18. The wire consists of rubber and paper insulated conductors lapped twice around by a closely compressed sheet of tinned copper. Another so-called earthed concentric system is made by Messrs. W. T. Henleys Telegraph Works Co., Ltd. The inner conductor is rubber insulated and there is a tinned copper tape under an outer covering of lead alloy. The accessories for use with both systems do not in my opinion invite great confidence.

"My experience is that there is no reduction in labour costs when fitting concentric systems but there is considerable increased risk of breakdown. With modern steel buildings if concentric wiring was much used there might be a temptation for an unscrupulous erector to omit sections of the outer conductor and simply attach to the building framework or gas or water pipes wherever he wanted to place a switch or light."



in the Benco Socket

- 1—Metal Protection—an armor against wear and weather.
- 2—Highly Insulated with Porcelain—covered by the metal armor.
- 3—Easy to Wire—safe and permanent.
- 4—Threaded for Quick and Easy Assembly—speeds up lamp and reflector cleaning.
- 5—Thoroughly Weather-proof.
- 6—Lamps cannot shake loose under vibration.
- 7—Of good appearance—in copper, brass or aluminum.
- 8—Keyless or Pull-Chain Control—chain comes straight down inside the socket and reflector.
- 9—Long Service—the best quality always proves to be the cheapest.
- 10—Made by Benjamin and therefore a Good Product.

Our nearest office will gladly furnish full information on Benco Sockets and Benco Threaded Accessories.

Benjamin Electric Mfg. Co.

General Offices and Factory
DES PLAINES, ILL.
(Chicago Suburb)

New York

Chicago

San Francisco

BENJAMIN
TRADE MARK

Save time and labor on wiring jobs Use MISENER products

Misener Rotary Hack Saw

Cuts clean round holes in terminal and junction boxes, slate and marble panels, and automatic starters for entering conduit.

Type B No. 2 Tool embodies 9 pipe sizes $\frac{3}{4}$ " to 4". Complete with $\frac{1}{2}$ " depth of Blades.....\$13.50

Type B No. 4 Tool embodies 6 pipe sizes $\frac{1}{2}$ " to 2". Complete with $\frac{1}{2}$ " depth of Blades.....\$ 7.00



Misener Safety Conduit Seals

These little discs of heavily waxed fibrous stock keep the exposed conduit airtight and water, dirt and cement proof.

They are slipped into the conduit bushing while the building is under construction and easily destroyed with a screw driver or knife when ready to fish the wire—not necessary to remove the bushing.

SEALS are inexpensive—plugged up conduits are costly.

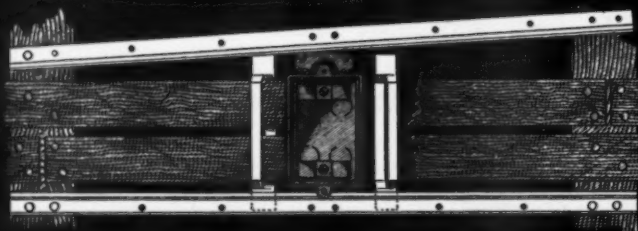
Size Inches	St'd Pkg.	Price per 100
$\frac{1}{4}$	500	.20
$\frac{3}{4}$	250	.25
1	250	.25
$1\frac{1}{4}$	150	.30
$1\frac{3}{4}$	150	.35
2	150	.50
$2\frac{1}{4}$	100	.70
3	100	.90

Tools, Blades and Seals Patented

Misener & Irving Mfg. Co., Inc.

Syracuse, N. Y., U. S. A.

KRUSE



PATENTED

Switch Box Supporting Strips with or without Lath Holders

$16\frac{1}{2}$ · $18\frac{1}{2}$ · $20\frac{1}{2}$ · $22\frac{1}{2}$ · $24\frac{1}{2}$ · $26\frac{1}{2}$ In. Lengths

Used by Contractors everywhere. A leader for ten years. Stocked by all leading jobbers. Millions of sets used yearly.

WE ALSO MAKE

Kruse Bar and Old Work Hangers
Non-Metallic Sheathed Cable Straps
Peerless Type A Old Work Hangers
Fitz-M-All Outlet Box Hangers
"Ready" Service Fittings

MID-WEST METAL PRODUCTS CO. Muncie, Ind.

Send us your latest bulletin with prices

Name

Address

Calderwood Defends 1928 Code

"Everybody's Business" was the subject of a very comprehensive speech on "The Wiring Code, Past, Present and Future," given by Hugh A. Calderwood, chief engineer for the National Metal Products Company and chairman of the League Wiring and Code Committee, at a meeting of the Electric League of Pittsburgh on March 11. The meeting was well attended and though there were many present who have been attacking the 1928 Code, Mr. Calderwood vigorously defended it.

* * *

Takes Away His Franchise

(Continued from page 35)

get the job. We have tried every way to meet this problem except selling dollar bills for seventy-five cents, and we cannot pay dividends that way. Some of our fellow competitors cut their price because work is slack, others, just to do a volume of business. The solution of letting these fellows cut themselves out of the business has been offered to us, but each time a few get out, others pop up to take their places. We are trying to sell the idea of having this work done by a responsible contractor and this sometimes works, but it takes hard selling to put it over and in the end there is a question in our mind whether it pays as well as if we put the same selling effort to some major appliance.

In merchandising, our serious problem seems to be coming to the old story of the power company stepping in on us. We hate to see ourselves thinking this way, as we know it is a poor alibi, nor are we letting it slow up our merchandising efforts and sales, but we have just recently had one of our best selling items, a washing machine, taken away from us and given to the power company. This was done without the jobber or manufacturer giving us a chance to prove our right to keep the franchise and after we had carried this particular make only in stock and always carried a representative line.

We realize that the manufacturer is interested in proper distribu-

tion but in this case we understand that this company is controlled by the same large manufacturer of wiring devices and appliances, whose devices and appliances we use exclusive. Now the question in our mind is how can anyone expect the electrical contractor-dealer to stay in business to use their wiring materials and sell their appliances if they are going to see the profitable major appliances taken away from him.

As far as we are concerned we expect to stay in the business and we like to sell the standard and best merchandise, but we do not feel like selling all of the leftovers and seeing the large power company get the cream.

We again apologize for this bum argument but as the saying goes, "It all depends on whose pocket it comes out of." The only remedy that we might suggest would be like the card the restaurant owner had over his cash register, reading: "We have made arrangements with the bank that we will not cash checks and they will not sell soup."

Harvey M. Chesney,

The Electrical & Hardware Co.
Bel Air, Md.

**"George, why didn't
you see to the wiring?"**



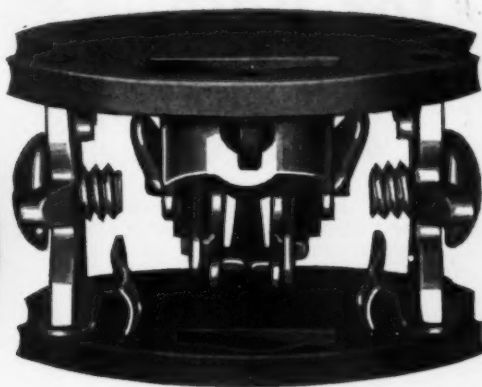
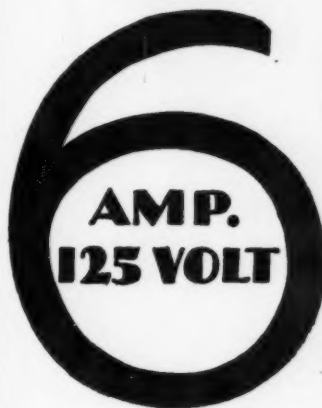
THE ELECTRIC ASSOCIATION

10 North Dearborn Street, Chicago

Telephone Room 4402

ADVERTISING WIRING—One of a series of advertisements to appear in Chicago newspapers over the name of The Electric Association.

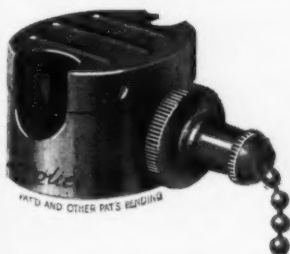
Levolier
REG. U. S. PAT. OFF.



Conduit Box and Fixture Switch

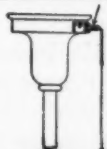
Note the extra heavy section of all parts, and particularly the heavy gauge and wearing surface of the switch contacts.

With the rugged metal structure and powerful spring, giving the switch blades a very quick make and break and a positive contact, the switch, while rated at 6 amperes, will take the initial 45-ampere smash of switching a cold 500-watt gas-filled lamp.



The smallest 6-ampere Pull
Switch made.

Your jobber can supply you
or write us direct and we
will send you a sample.



For Canopies
of Pendant
Fixtures



Used in
Knockout of
Conduit Box



For Shallow
Ceiling
Fans



For Canopies
of Office and
Store Fixtures



Pull Sockets
Pull Hooks
Conduit Box,
Fixture, Lever, Pull
and In-Between
Switches
Hickory

MCGILL
MANUFACTURING CO.
Electrical Specialties of Quality

ESTABLISHED 1904

VALPARAISO - INDIANA



Lamp Guards
Lamp Coloring and
Fixtures
Soldering Flux
Blow Torches
Lamp Changers

Profitable for Both

**Contractors
and Users**

The more money contractors can save for their customers, the more they can make themselves.

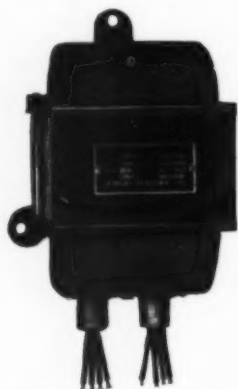
The big industrial field welcomes the savings to be realized by transforming the current to better fit the equipment and lighting with

New Code **SORGEL** Air-Cooled **Transformers**

**With Conduit
Connections**

No Extra Fittings Required

Can be installed in any convenient place inside of buildings, without enclosures or fire-proof vaults.



Made in Sizes $\frac{1}{4}$ to 50 KVA.

Single phase, two-phase, and three-phase

110, 220, 440, 550 Volt

Meet the Requirements of the New Code

**Transformers Designed
for Special Applications**

Ask for descriptive literature

Sorgel Electric Co.

Clybourn & W. Water Sts.
Milwaukee, Wis.



SECRETARY TAMPA ELECTRA-GISTS—P. F. Lyons, vice president and treasurer of Hale & Buerke Co., Tampa, Florida, has been secretary of the local electragists for the past two years. Standing to the right of Mr. Lyons is C. E. Davis, in charge of outside sales and construction, who has been with the company for the past four years.

Can Now Clean Inside of Lamp Bulbs

The development of a practical method for removing the black deposit which gradually collects on the inner surface of high-powered incandescent lamps has been announced by the lamp development laboratory of the incandescent lamp department of the General Electric Company at Cleveland. The effects of the discovery will be felt almost immediately in the fields of aviation and motion picture production, where high-powered and high-efficiency incandescent lamps play roles of vital importance.

The new deposit-remover is a tablespoonful of coarse tungsten powder, placed inside the lamp before it is sealed. After the lamp has become blackened from use, the operator needs but to remove the lamp from its socket, invert it, and "sweep" the filament deposit off the inner glass surface. The lamp is thereby restored to its former efficiency, as good as new. With the bulb-blackening difficulty practically removed, the lamp filament may be heated

ADAPTIBOXES

**Save at Every Stage
of the Job
Because—**

- 1**—Low Stock Investment. You don't have to carry a stock of special fittings you'll hardly ever use, because the ADAPTIBOX principle of the removable sides lets you make up "Specials," right on the job, from standard fittings.
- 2**—No waiting for special stock while "everything stops but the time-clock"—for the same reason.
- 3**—Extensions and last minute changes easily made without breaking fittings or disgruntling the customer.



Adaptiboxes have all the rigidity of ordinary fittings, plus unequalled adaptability.



Any ADAPTIBOX can be disassembled and made up into a different type in a jiffy by interchanging the removable sides. Do it right on the job with a screw-driver.

- 4**—Less Ladder and Scaffold Work. Most of the long runs can be assembled on the floor and connected up in whole sections.
- 5**—Where the solid type of fittings is also wanted, you can order both types of fittings from one source and get better quantity discounts by specifying ADAPTIBOXES and

ADAPTILETS

Why not "ADAPTi-fy"?

The ADAPTi Co.
2996 E. 72nd St., Cleveland, O.

NEW YORK CITY
A. Stone, 112 East 23rd St.

PHILADELPHIA
Craven Electric Sales Co.,
30 Bank Street

SOUTH BOSTON
The Hastings Electric Sales Co.,
42-50 Binford Street

much nearer to its melting point, without endangering the bulb and without shortening the customary 100-hour life for which the lamps are designed.

* * *

Only Twenty Electrical Fires in 1928

Evansville, Ind., a city of 100,000 population, had but twenty fires of electrical origin in 1928. The city electrical inspection department not only inspects new work, but has a reinspection service as well. Last year it found 463 unsafe installations and had all of them corrected. Adequate wiring, as will be seen in the following rules taken from an official bulletin, is a large part of the answer to safety in new work:

No new wiring to be tapped on any old wiring without permit as per Section No. (21) Electric Code.

Permit must be taken out before any work is started, and permit tag must be in front of building in plain view before inspection is granted. Section 16, page 12 Building Code.

All Oil Service Stations, service must be not less than 60-Amp. 3-wire.

There must be a pilot light receptacle installed in all kitchens in residences and apartments, the first one installed in breakfast rooms, bath rooms and laundry must be pilot light.

All Bell Transformers to be installed within reasonable distance of meter cabinet.

Only conduit type bell transformers to be used.

No switches to be fastened to slip canopy that does not support weight of fixture.

Show windows not over six medium base sockets per circuit.

Not over 1,200 watts per circuit.

All motors over one H. P. to be controlled with starters which have no voltage protection.

All Electric Refrigerators to be on a separate circuit.

All Electric Furnaces to be on a separate circuit.

All Motor driven fans on furnaces to be on a separate circuit.

All Electric Pumps to be on a separate circuit.

All old services changed or replaced comes under present regulations.

All Light Outlets in bath rooms to be controlled by wall switch or switches.

Range switches in single family residence may be installed in easily accessible basement.

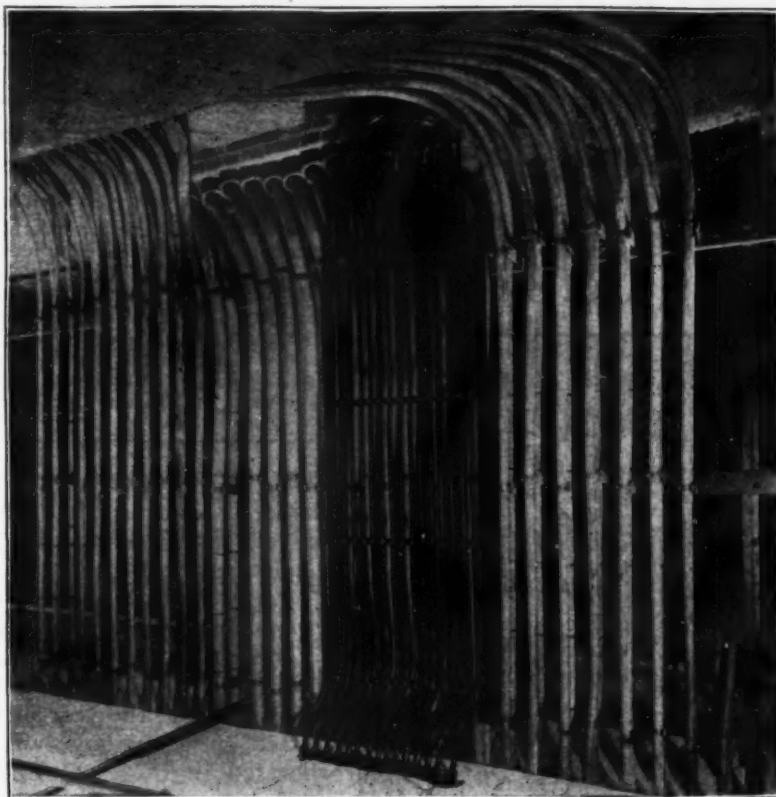
All Light and Power Services to be grounded with safety grounding circuit as per drawing No. 1-2-3.

When wiring system is grounded with safety grounding circuit as per drawing No. 1-2 and grounded to water piping system.

Bare Neutrals can be used anywhere in rigid conduit only on alternating current systems.

All bare wire over No. 8 must be stranded standard stranding and soft drawn.

Minerallac Cable and Conduit Hangers— in close quarters



Approved by the Underwriters' Laboratories

Open wiring, conduit and cable may be rapidly installed and very compactly arranged
with these hangers

Japanned or Galvanized

From $\frac{3}{8}$ to $2\frac{1}{2}$ inches, both inclusive,
pipe measurement

MINERALLAC ELECTRIC COMPANY

25 North Peoria Street

CHICAGO, ILL.



CONNECTORS

Will do a neater,
cleaner, quicker
JOB

BUY
Porcelain
Connectors
THEY ARE SAFE!

SIMPLEX
LARGE



Don't

muss up
clean
ceilings
with
tools
paint
solder
tape
and
torch

Just
Twist on
the
Simplex

Send for
samples
and
test
them
on the job



SIMPLEX
MEDIUM

USE



Trade Mark Reg.

CONNECTORS

Ask Your Jobber!

WEISS & BHELLER, INC.
584 BROADWAY • NEW YORK

Iowa Electragists Meet in May

The annual spring meeting of the Iowa Electragists will be held at Marshalltown, Iowa, May 20 and 21. The executive committee will hold a preliminary meeting on May 19. Details of the programs are now being worked out.

Because of the success that the state association has had in improving industry relations, it is expected that the meeting will draw a number of men of national prominence to see at first hand how the association operates.

* * *

Over 600 Price Changes

Between six and seven hundred changes were made this month in the Resale Price Service. Last month there were four hundred changes. Users of this service are, therefore, cautioned always to use the latest issue. To use an old issue when a new one is to be had may easily involve a considerable loss.

To Publish 1929 Code

Instead of printing the 1929 revisions as a supplement to the 1928 National Electrical Code, as was done with the previous Code, it is now planned to print a 1929 Edition. The actions of the Electrical Committee at its February meeting and of the correlating committee on grounding, will be incorporated in the 1929 Edition upon approval of the N.F.P.A. at its annual meeting in May.

Among the revisions that have been passed are the following:

For runs up to 50 ft. and not over two 90 degree bends, 1 in. conduit may be used for 3 No. 6's. Formerly 1 1/4 in. was required. The change was originally intended for services, largely to help range wiring, but finally was accepted as applying to all short runs.

Mercury vapor lamps, formerly restricted to 15 amp. circuits may now, as with moguls, be used on 40 amp. circuits, if no other apparatus is on the circuit.

Window strip radio lead-ins are permitted.

Tinsel cord is recognized.

One sixty-fourth cord is approved for use with radio and clocks.



Reflectors For Factories

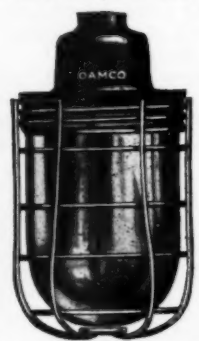


No. 871 is made to RLM standard specifications. Porcelain enameled green outside—white inside. Made in four sizes for 60, 100, 150 and 200 watt lamps.

Gas & Vapor Proof Units



No. 881



No. 881B

For use in mills, paint rooms, garages, refineries or any place where there is danger of explosion from overheated lamps. Lamp is protected from dust, moisture and breakage.

Outdoor Fixtures



For use around barns, yards, garages, etc. Reflector is porcelain enamel and all iron parts are electro galvanized making complete fixture weather-proof.

Catalogue on application

Forty pages of money-making reflectors suitable for every job you bid on.

**OVERBAGH & AYRES
MFG. CO.**

413 So. Clinton St., Chicago, Ill.

Poor Business

The following paragraphs taken from *The Outlet*, the official organ of the Electric and Radio Association of Kansas City, Mo., tell an eloquent story of short-sightedness on the part of certain contractors:

"One of the new wiring rules put into effect January 1 by the City Electrical Inspection Department, was that all knob-and-tube wiring be installed on the 'loop system.' It developed that houses could be wired cheaper by flexible armored cable; even so, many house wiring contractors raised the price of wiring a house by as much as 50 per cent over their former price. Consequently, the Real Estate Board objected vigorously to this particular rule.

"After a careful investigation and a number of conferences, City Electrician McCormick revoked this one rule on March 15. The other rules remain in effect.

"At one time all of the new rules were in danger, but after considerable effort we managed to save the other rules. This was as it should be, for they are progressive and real public safety measures."

* * *

Owner Pays Builder Yet Contractor's Lien Holds

Under certain circumstances, a sub-contracting electrical company is entitled to a mechanic's lien and may recover payment from the owner of property on which work has been performed, although the owner has paid this amount to the principle contractor.

For instance, in *Hasson Vs Bruzel*, 144 Atl. 319, the records show that an owner of property and a contractor entered into a contract for alterations of and repairs to certain premises in Atlantic City. The contract provided that the work should be performed "as shown on the drawings and described in the specifications prepared by * * * architect. The final payment shall be made within thirty days after the completion of the work included in this contract, and all payments shall be due when certificates for the same are issued."

The specifications under the heading "Changes" read: "The

ONLY

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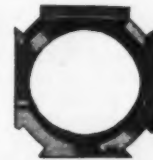
NUT!

—but

IT'S A



Superior



—and how necessary—how essential!
Inexpensive but important!

CST SUPERIOR Notched Locknuts are absolutely the latest type—formed to make a perfect grounding connection at the box—notched to facilitate installation.

The Notched Locknut is standard on fifteen sizes of the CST Line of Box Connectors.

All CST Fittings are perfectly machined and thoroughly galvanized—insist on your jobber furnishing them—they cost no more.

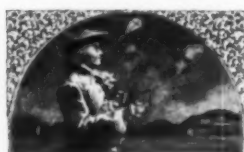
〔 Send for Free Samples and our catalog of
The Steel Tank Line of Conduit Fittings. 〕

Chicago Steel Tank Co.

Electrical Division

6400 West 66th St.

Chicago



Holtzer-Cabot
SIGNAL SYSTEMS
ESTABLISHED 1875



Many Holtzer-Cabot bell installations have been in continuous operation for over 30 years.

High-Grade Bells

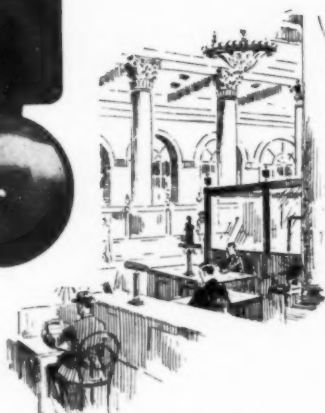
Bells for factories, school dormitories, convents, etc., must be of superior construction to operate satisfactorily over a long period of years. The bell shown here, type P. S., is designed to operate from the lighting circuit or from a transformer. There are no contacts of any kind and only one moving part.

The current consumption is so small that this bell can be successfully used to replace old battery bell installations where wiring is usually small.

Catalogue with latest prices furnished on request.

The Holtzer-Cabot Electric Co.

Boston Philadelphia Chicago Cleveland New York Minneapolis Baltimore Pittsburgh Detroit
Syracuse Kansas City



owners shall have the right at any time to make changes, additions or omissions that they may desire, and the same shall be executed by the contractor as a part of this contract, without impairing its validity and the value of the changes are to be agreed upon in writing to the architect and added to or deducted from the contract price. No claim for extra work will be allowed unless the same is ordered in writing by the owners through the architect, and the cost agreed upon, and stated in the order."

In accordance with these stipulations the owner in writing ordered the contractor to perform certain extra electrical work for \$650. When the job was completed, the owner paid for this extra item, but the architect failed to issue a certificate for it, although certificates were issued by the architect for all other payments made by the owner. Later the Gruen Electrical Company filed a mechanic's lien and levied on the money due the principle contractor from the owner.

The question presented the Court was whether the electrical contractor was entitled to recover from the owner the \$650 paid the principle contractor and for which no certificate was issued.

In holding the owner liable to pay this amount to the electric company, although he had paid it to the principle contractor, the Court said:

"The contract is explicit that the amount to be paid under the contract is subject to additions and that such sums (i.e., the amount of the contract and 'additions') shall be paid 'only upon certificates of

Beating Competition with Brains

Competition is tough in the electrical contracting business these days; and every day it gets worse. Successful contractors have found they can beat fly-by-night competition best by using their brains, and by educating their responsible employees. You can help your head men to keep abreast of the times and save you money by sending each his own copy of ELECTRICAL CONTRACTING.

"DETROIT" RUBBER COVERED WIRES

(Reg. U. S. Pat. Office.)

RUBBER INSULATED
WIRES AND CABLES

LAMP CORDS

AUTOMOBILE WIRES

PARKWAY CABLES

LEAD ENCASED
RUBBER INSULATED
WIRES AND CABLES

UNIDUCT ARMORED
WIRES

FLEXIBLE METALLIC
CONDUIT

Detroit Insulated Wire Company
Detroit, Mich.

Division of General Cable Corporation



SPECIALIZES IN SUMMER HOTEL WIRING—Jack Lerner, Economy Electric Co., Ellenville, N. Y., being located in a district that draws vacationists from everywhere during the warm months of the year, is specializing in the wiring of summer hotels and boarding houses. His latest job, the new 150-room Nevelle Mansion, is shown.

the architect.' The order of the architect to perform the extra work, above quoted, cannot be deemed a certificate to pay A reading of the contract in its entirety clearly indicates that the architect is to determine, when the work is completed, if done in accordance with the contract plans and specifications and if and when money is due and payable therefor. To authorize the payment of the sum of \$650, for extra work, the contractor was therefore bound to produce and present a certificate of the architect of such payment It follows that the owner is liable to a party furnishing labor or materials who served notice (prior to the issuance of any such certificate) to the full amount of his claim, not exceeding the full amount of such advance payments."

Leo T. Parker.

* * *

And Their Sins Returned Unto Them

The other day the sales representative of a commercial lighting unit manufacturer called upon a contractor and urged him to get busy and sell new equipment to office buildings in which the lighting was out of date.

"Take that building over across the square," he argued. "I know the stuff in there is ten years old, the light is bum, the tenants are dissatisfied, and the landlord is losing rentals. It'll be a pipe for us to go over there and sell that landlord a hundred of these new units. Come on—I'll help you."

"Nix," replied the contractor. "It can't be done."

"Who says it can't be done?" demanded the salesman. "I'll show you it **can** be done. I'll take you over and **do** it."

"Nope," persisted the contractor. "And I'll tell you why. The wiring in that building won't carry the load. I know because I put it in. I figured that job down to the bone and put in just enough capacity to allow a hundred watts to the outlet. Your fixture takes two hundred or three hundred watt lamps. The wiring won't carry 'em."

"Of course I know **now** that I was a fool for figuring the way I did," he continued, "but that's

Every Length of "GALVADUCT" and "LORICATED"



is free
from scale

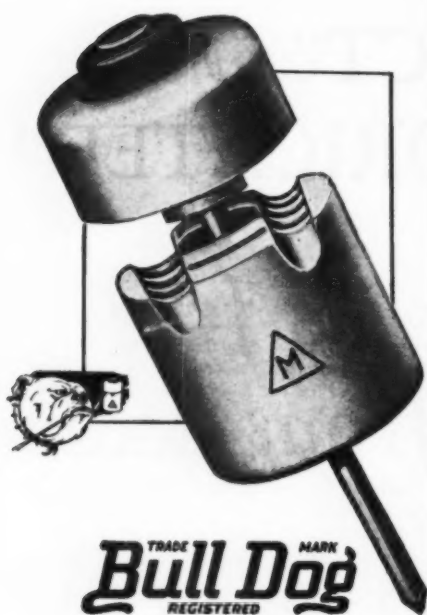
After lengths of "GALVADUCT" and "LORICATED" are threaded and reamed they are cleaned by pickling in acid baths. By this process any scale is loosened and removed. Then by sandblasting, the inside surface is made absolutely smooth. After these operations, the outside and inside surfaces are carefully inspected, the latter being done by using high powered electric lights.

GARLAND Manufacturing Co.

Pittsburgh,

Pennsylvania

"It has a grip like its namesake"



Split Knobs

THESE are the safe, approved knobs for all types of residence wiring. They mean better jobs at no added cost. Bull Dog Split Knobs, together with Illinois Porcelain Tubes, Cleats and Solid Knobs form a complete line of standard porcelain.



Sold Through Wholesalers

Illinois Electric Porcelain Co.
Macomb, Illinois

the way ninety-nine jobs in a hundred are figured. We put in just the least amount of material possible, and now—"

"Now you lose the chance to sell re-lighting equipment that would pay you more profit than you made on the original job," cut in the fixture man.

"Yep," agreed the contractor.

[The question is: Did he learn a lesson or did he keep on figuring jobs on just the same basis?—Editor.]

* * *

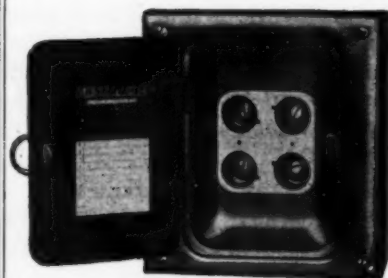
Market Development for New York City

The electrical industry of New York City has definitely decided to set up an active program of market development, to embrace the industrial and commercial as well as the domestic fields. The action taken at a meeting of twenty-five leaders of the local industry on February 25 is to merge into this new organization both the Electrical Board of Trade and the New York Electrical League, but to continue their work and preserve their entities in so far as possible by having them function as sections of the new organization. This gathering—a cross-section of the local industry—was brought together by Earl Whitehorne, who is president of both the Board and the League.

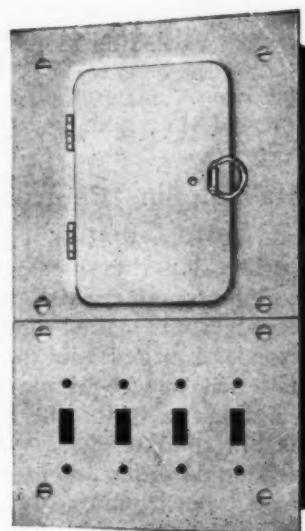
A committee on organization and finance and a committee on market development were appointed and will work out the program and bring back definite recommendations for carrying through the project. Mr. Whitehorne is chairman of the organization and finance committee with Clarence L. Law, general commercial manager of The New York Edison Company, as vice-chairman. John G. Johannessen, president of the General Electric Supply Corporation, has been appointed chairman of the committee on market development with Walter Williamson, vice-president of the Alpha Electric Company, as vice-chairman.

The electrical contractors were represented at the conference by T. H. Joseph, president, E. J. Electric Installation Co.; A. Lincoln Bush, president, Belmont Electric Co.; W. F. Austin, presi-

Everything- You can desire in Panel Boards



Cat No. BS 4



FUSITHERE Panel Boards are designed to facilitate installation in every possible way, as well as give the customer the best equipment for the purpose. Neat and compact, they have ample wire space. Flush boxes have adjustable plate. Panels are Copper bus bar type with accessible wire terminals, test holes and dead front. Various size knockouts on all sides and back.

Full line of fuse panels and cabinets for any installation.
Industrial and theater switchboards. Stage foot and border lights.

Your inquiries given our prompt attention

**ELECTRIC APPARATUS
CO.**

702-706 N. HALSTED ST.
CHICAGO, ILL.



dent, Austin & Moore; Hugo Tollner, president, Tollner Electric Co., and Samuel Altschuler, Criterion Electric Co.

* * *

Jacob Fischer

Jacob Fischer, president of the J. Fischer Electric Company, Denver, Colo., died on March 13, after a prolonged illness.

Mr. Fischer started in the electrical contracting business with his brother in Saginaw, Michigan, in 1891. Eight years later he went to



Jacob Fischer

Denver where, with others, he incorporated the Electrical Supply & Construction Company, of which he became president. Seven years later he sold his interest in the company, but continued in the contracting business under his own name.

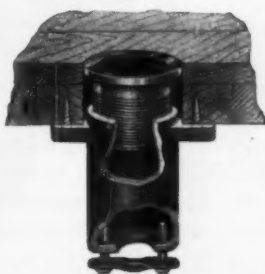
Mr. Fischer was a construction engineer as well, having been retained as engineer on many of the new buildings in Denver, including the well known Denver Gas & Electric Building.

* * *

R. L. Clift

Robert L. Clift, well known contractor-dealer of Memphis, Tenn., died January 20, in his forty-fifth year. Mr. Clift, who operated the Electric Novelty Company, was formerly president of the Tennessee Electragists and of the Memphis Electrical Contractors Association.

Learn to say "LATROBE" when you need FLOOR BOXES



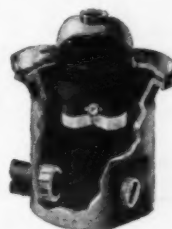
Sectional view of No. 300 Box illustrating installation in floor

This is the only Flush Non-Watertight Floor Receptacle and Box on the market approved by the Underwriters Laboratories for installation in wood floors.

Designed to provide an extremely small flush convenience outlet (only 2" diameter) with low installation cost and rugged mechanical construction. Recommended for installation under dining tables, in living rooms, show windows, etc. Ideal for "all electric" A. C. radio sets. May also be used for Ground and Aerial connection by using Polarity Plug in Receptacle. Cheaper to install in old houses than baseboard outlets. Every "Red Seal" wiring job and every "Electrical Home" should be well provided with No. 300 Floor Receptacles.



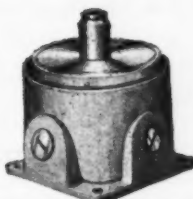
No. 100 Box with No. 206 Nozzle



Cut-away view of No. 110 Box showing how the tapered unit receptacle fits tapered opening in top of box body



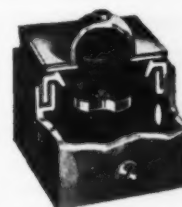
No. 285 Nozzle with two Duplex Receptacles, Mounted on No. 200 Cover Plate



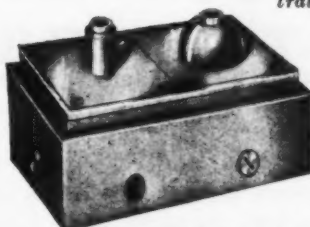
No. 120 Adjustable Floor Box with No. 206 Stem Nozzle



No. 130 Adjustable Floor Box with No. 207 Bell Nozzle illustrating No. 208 Unit Receptacle



No. 251 Square Adjustable Floor Box with No. 207 Bell Nozzle illustrating No. 208 Unit Receptacle



No. 252 Box with No. 206 and No. 207 Nozzles

No. 253 Three Gang and No. 254 Four Gang Floor Boxes also furnished for use where a variety of service is required from one location.

Write for Catalog and Free Copy
1928 National Elec. Code.

Fullman Manufacturing Co.
Latrobe, Pa.

Rubber Insulated Wires and Cables

Insulating Tapes and Splicing
Compounds



Raven
Core
Wires
Grimshaw
Tapes
Competition
Tapes

**NEW YORK
INSULATED
WIRE CO.**

Main Office
114 Liberty Street,
New York City

Factory:
Wallingford, Conn.

Approved Burglary Appliances List Available

The 1929 list of Inspected Burglary Protection Appliances published by the Underwriters' Laboratories is now available. Secure copies by addressing the Laboratories at 207 E. Ohio St., Chicago, or one of its branch offices.

* * *

Sturgeon Heads Denver Modernizing Bureau

D. D. Sturgeon, an electrical contractor and chairman of the Electrical League of Colorado, has been elected chairman of the Denver Home Modernizing Bureau. Under the Denver plan only such contractors who are members of the Bureau will be permitted to figure on work laid out by the Bureau. All contractor members of the Electrical League by virtue of that membership are members of the Bureau.

* * *

Code Violators Make Good

A new method for handling Code violations has been inaugurated by the City Inspection Department of Los Angeles. Instead of taking the offender into court and obtaining conviction with consequent fine or jail sentence, he has been given the opportunity of making good to the owner. In some cases this has required an expenditure of as high as \$500.00 by the offender in order to bring the job up to Code standard.

* * *

The Successful (?) Bidder

Bids for wiring a four-story addition to the Canton, Ohio, Court House were recently opened and the result again raised the question as to who was the successful bidder.

The building is stone with jumbo tile backing and metal joist floor construction. The work calls for 34 center outlets, 14 single pole flush switch outlets and 29 base receptacle outlets, all wiring to be in rigid iron conduit.

Each bid was to be accompanied by a certified check for 10 per cent to guarantee fulfillment of contract.

The architects' estimate for wiring was \$500. There were five bidders, as follows: \$479, \$460, \$440, \$375, and \$201.

Keep Up-to-Date

—□—

By reading these pages you will acquaint yourself with what is newest and best in electrical supplies and equipment. When communicating with an advertiser mention

Electrical Contracting

ELECTRICAL EDUCATOR

LEARN ELECTRICITY—EASY AS A, B, C. Key to theory and practice. Applications, Rules, Calculations and Inside Information on Maintenance and repair of Electrical Appliances, Motors, Wiring, Lighting, Switchboards, Transformers, Batteries, Armatures, Generators, Radio, Ignition, Welding—2000 pages, 2000 diagrams—a reliable reference. Trouble saving information. AUDEL'S HANDY BOOK OF PRACTICAL ELECTRICITY. Price \$4. Let us mail it to you for free trial; pay \$1 a month thereafter. Order today!

THEO. AUDEL & CO., 65 W. 23d St., New York, Dept. 817

The Jiffy Line

Jiffy Tools Reduce Costs!

Save Time, Labor and Money
with these valuable labor-saving items

We guarantee your satisfaction. Order any tool illustrated on the margin, on approval. If YOU are not satisfied return the material at our expense.

A Bulletin describing the complete line in detail will be mailed upon request. Fill in the coupon below or send in your order ON APPROVAL.

ESTABLISHED 1915



Paul W. Koch & Company
25 So. Wells St., Chicago

- ☐ Send information regarding free trial.
☐ Send the "Jiffy Line" Bulletin.

Name.....

Firm.....

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Address.....

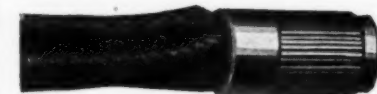
4-10-29

No More Pierced Tape Joints

IDEAL Universal Wire Connectors



Cross section
view



Completed Joint

Solderless! Tapeless!

Eliminate grounds often caused by wires piercing tape on taped joints.

One size fits all common wiring and fixture joints.

Write today for FREE Sample

Ideal Commutator Dresser Co.
1041 Park Ave., Sycamore, Ill. 420
Please send me Free Samples of Ideal
Universal Wire Connectors.

Name.....

Address.....



BUILDING DESIGNED FOR FLOODLIGHTING:—Since floodlighting recommendations were made prior to the construction of the building and since all outlets were arranged in conformity with a layout prepared by illuminating engineers, the floodlighting of the Fisher Building, Detroit, has been made especially effective. The building surface is entirely of marble, and of sufficiently rough surface to take floodlighting readily. The edifice was adapted for night illumination by the use of setbacks for locating the 530 General Electric floodlights.

BOOK REVIEW

New Book on Armature Winding

A second book, "How to Wind Direct Current Armatures," by W. E. Hennig, formerly Chief Instructor of Practical Electricity in the Milwaukee School of Engineering, is just off the press.

This revised edition includes terms, symbols and additional examples illustrating the application of various factors in armature winding calculations; testing wave-wound armatures, calculating field-coil windings and a comprehensive treatment of the new, so-called, "frog-leg" windings, as well as nearly all the winding diagrams heretofore contained in many books. Questions and problems follow each of the nine chapters.

This class or home study textbook is suitable for the student and the novice, as well as a source of reference for the well-grounded expert. Published by The Bruce Publishing Company, Milwaukee, Wis.



Levolver Link Switch for Chain Fixture Installations

Every lighting installation that's made, whether it be a new one or the old fixtures replaced, the Levolver Link Switch should go with the installation.

It is the switch that fits in nicely where there is a necessity for economy of installation and convenience in operation.

The Link Switch attaches to the fixture ring or between two links of the chain on new work. On fixtures previously hung it takes the place of one of the links without altering the length of chain or rewiring or splicing of lead wires.

The switch is made up of the standard Levolver Fixture Switch, the Levolver Link and locking attachment. Brushed brass or Jap bronze finishes.

Your jobber has them or we will send you a sample



MCGILL
MANUFACTURING CO.
Electrical Specialties of Quality
ESTABLISHED 1904
VALPARAISO • INDIANA



Position your socket!



MULTI REFLECTOR SOCKETS

include the added feature—at no more cost—of a socket capable of adjustment for ceiling heights and lamp sizes

Our new Reflector Bulletin No. 6 makes profitable reading.
SEND FOR IT NOW

MULTI ELECTRICAL MFG. CO.
1840 W. Fourteenth St., Chicago, Ill.

Manufacturers News

A department for the announcement of activities of manufacturers that are of interest to contractors, such as changes in executive personnel, branch offices, new products, etc.

General Offices of Benjamin Moved

Announcement has been received of the removal of the general offices of the Benjamin Electric Mfg. Co. from 120 S. Sangamon St., Chicago, to the company's factory at Des Plaines, Ill. The Chicago sales offices are now located at 117 S. Morgan St., where C. B. Harlow, sales manager of the central division, and G. B. Weber, sales manager of the Porcelain Enameling & Stamping Division, will be in charge.

* * *

Square D and Industrial Controller Combine

The Square D Co., Detroit, Mich., announces that the manufacturing, financial and engineering resources of its plants in both Detroit and Peru, Ind., have been united with those of the Industrial Controller Co., Milwaukee, Wis. The two will be conducted under one management known as the Square D Co., and will serve the industry through three divisions.

The switch and panelboard division, at Detroit, will manufacture industrial safety switches, meter service switches, "Square-Duct," panelboards, fuse cabinets and voltage testers. The porcelain division, at Peru, will produce porcelain insulators and special porcelain products, while the industrial controller division will manufacture automatic and hand-operated compensators, speed regulators, motor circuit switches, automatic starters, field rheostats, magnetic contactors, pressure and float switches.

The management of the individual companies in the past will continue to head the new combination. T. J. Kauffman is presi-

dent and operating head of the business. A. A. Schueler, for several years sales manager of the Square D Co., becomes general sales manager. F. W. Magin, who was general manager of the Industrial Controller Co., will remain with that division in the same capacity, in addition to becoming vice-president. H. L. Van Valkenburg, chief engineer of the Industrial Controller Co., will continue in the same position with that division.

* * *

Mohawk Conduit Appoints Slater Sales Manager

H. R. Slater, for the past three years traffic manager and assistant sales manager of the Mohawk Conduit Co., Cohoes, N. Y., has been promoted to the position of sales manager. He will have charge of all of the company's branch offices.

Through a campaign which he is inaugurating, Mr. Slater hopes to further among the trade a demand for better electrical equipment of all kinds in keeping with the trend toward finer architecture.

* * *

Cutler-Hammer Announces Organization Changes

On March 1st, P. S. Jones became manager of the New York district office of Cutler-Hammer, Inc., Milwaukee, Wis., manufacturers of electric motor control and allied apparatus. Mr. Jones was formerly manager of the Pittsburgh office and succeeds C. W. Yerger, who leaves to join the Hanson-Van Winkle-Munning Co., Matawan, N. J. T. S. Towle, formerly a sales engineer at the Pittsburgh office, becomes manager of that office.

G. E. Hunt, located in the Philadelphia office for the past 10 years, has been placed in charge of the company's distributors' sales.

* * *

Chicago-Jefferson Change Name

The officers of the Chicago-Jefferson Fuse & Electric Co., Chicago, announce that the company will hereafter be known as the Jefferson Electric Co. There is no change in organization, the name being shortened simply to make it easier to use and remember.

* * *

Miller Co.'s New York Office Moves

The New York office and showroom of The Miller Co., Meriden, Conn., is now located in the Scientific American Bldg., 24 W. 40th St., where the company will maintain a complete display of its products.

* * *

Sales Contest for Curtis Dealers

In connection with its dealer development plan, Curtis Lighting, Inc., Chicago, has announced a "Proved Sales Idea" contest to be promoted among its dealers during 1929. Prizes aggregating \$150 will be offered every other month to those who write the best stories describing a plan which has been worked out for increasing the sale of Curtis products or telling of an actual sale made. The first prize is \$75, second, \$50 and third, \$25. The prize stories will be printed and broadcast to all of the company's dealer-contractors and central-station men.

This company will also, during

A BIG MONEY SAVER

Eliminates triple handling—unwinding—measuring and rewinding wire, thus saving time and money. Manually operated—reels wire into neat coil, automatically counting and registering number of feet. Strongly built of heavy selected materials so as to last a lifetime.

It Pays for Itself

Send for bulletin.
Write us or your jobber.

**Minneapolis Electric
and Construction Co.**

60 S. 12th St.
Minneapolis Minn.



1929, issue a series of circulars entitled "Little Stories of Light," covering interesting facts in the lives of the great scientists who have contributed to present-day lighting knowledge. This series is being issued in commemoration of the fiftieth anniversary of Thomas Edison's invention of the incandescent lamp.

* * *

Chambers Co. Handles Mohawk

The Fred E. Chambers Co., 204 Holliday Bldg., Indianapolis, Ind., has been appointed representative of the Mohawk Conduit Co., Cohoes, N. Y., in the territory of Michigan, except Detroit, and the entire states of Ohio, Indiana and Kentucky, except the city of Louisville, Ky.

* * *

Kester Benjamin's Merchandising Manager

L. W. Kester has been appointed merchandising manager of the electrical division of the Benjamin Electric Mfg. Co., Chicago, also chairman of the merchandising division. R. W. Staud, advertising manager, has been made secretary of the committee.

* * *

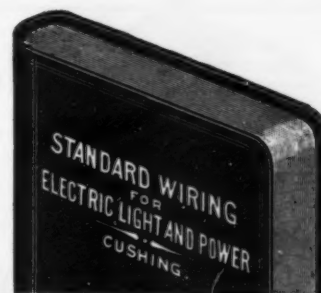
A complete reprint of the panel-board pages for Catalogue No. 13 and Bulletin No. 7 has been issued by the Trumbull Electric Mfg. Co., Plainville, Conn. These pages show: Revised arrangement of listings; several price reductions; additional pages of descriptive matter and illustrations, and a change in box sizes on four circuit panels. The manufacture has been discontinued of push and snap switches, pages 140 and 144, and receptacles and attachment plugs, page 149, all catalog 13.

* * *

The M. B. Austin Co., Chicago, has appointed J. A. Hawks, Inc., New York City, a distributor of its lines.

* * *

The Wagner Electric Corp., St. Louis, Mo., has issued bulletin No. 161 containing instructions for the installation and operation of power and distribution transformers.



EVERY WIREMAN & CONTRACTOR NEEDS IT

The 1929 Edition Completely Revised to Date

It contains The New National Electrical Code explained and illustrated. New illustrated chapters on Outside and Inside Wiring for all systems for both direct and alternating currents: Commercial, Industrial and Residence Wiring, Garage, Theatre and Moving Picture House Wiring, Electric Sign and Radio Wiring, also—

"The Red Seal Wiring Plan," with all tables and illustrations.

"The Franklin Specification" for Commercial and Industrial Lighting. Everything a Contractor Should Know.

504 Pages — 221 Illustrations — 102 Tables

Leather Cover, Gilt Edges, Pocket Size \$3.00

Sent Post Paid on Receipt of Price

By H. C. CUSHING Jr., Publisher

13 WEST 55th STREET NEW YORK

Electricians!

—this hammer is going over big! It is new, useful, and sells to you direct for only **\$2.00**

A N elec-
trical me-
chanic designed
this hammer. He
gave it a long
poll (2 inches) to
reach over pipes
and into outlet

boxes. The
claw is built
for prying; the
handle is sea-
soned Hickory. One
electrician writes,
"Now I wouldn't be
without it in my tool

kit!" You'll say the same—or your money back!

SEND COUPON TODAY!

Evansville Tool Works, Inc.,
Evansville, Indiana

Gentlemen:

I am enclosing my P. O. Money Order for \$2.00. Please send me the No. 77 Electrician's Hammer at once.

Hdw. Dealer

Address

My name

Address



Galvanized

ZINC coating withstands double the Underwriters' requirements of two one-minute dips in a copper sulphate test. Pittsburgh Standard Galvanized Conduit meets the test of FOUR such dips. It needs no fancy coating on top of the zinc. Made of heavy wall soft steel pipe, cleaned by our own special process.

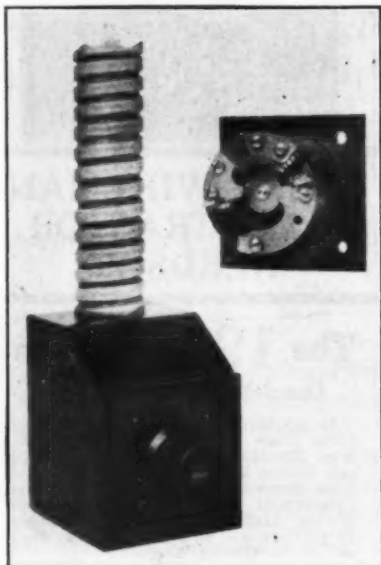
Inside coating our own Special Black Enamel (pure linseed oil and gilsonite) BAKED ON. Tough for endurance, smooth for easy fishing. You will like P. S. Galvanized.



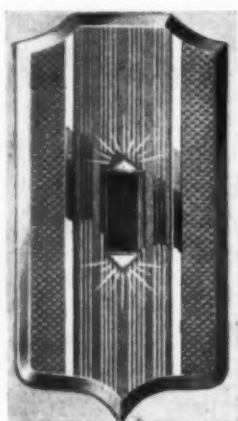
**ENAMELED METALS CO
PITTSBURGH, PA.**



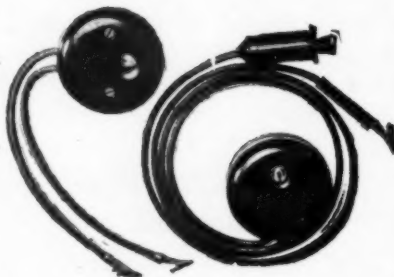
New Electrical Products



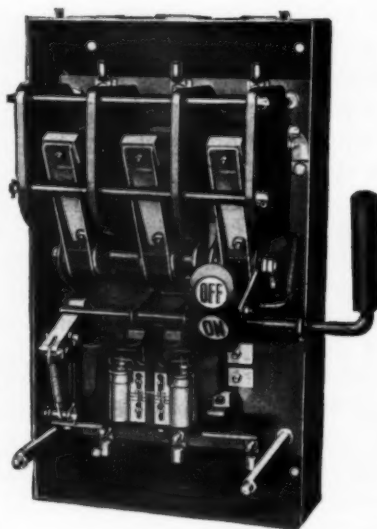
The new safety push button developed by the Lincoln Electric Co., Cleveland, has a ball top "start" button which is contained inside a large "stop" button projecting over the former, in this way protecting the "start" button from accidental contact. Both buttons and all insulating parts are of moulded bakelite. The inner mechanism is enclosed in an arc welded steel box $2\frac{1}{2}$ by $3\frac{1}{4}$ by $2\frac{1}{2}$ in. This device is available for use with any type of starter.



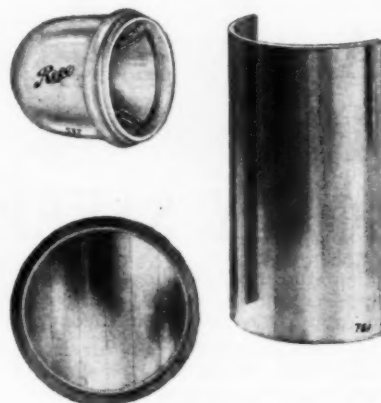
S. Buchsbaum & Co., Chicago, announces a line of switch plates and receptacles made from heavy brass and finished in twelve colors or silver or gold plated. They are made in two sections, the first screws into place like an ordinary switch plate and the second, an artistic cover plate, snaps over it concealing all screws. Worked into the design of each plate is a luminous radium spot. Illustrated is No. B200, with two luminous triangles.



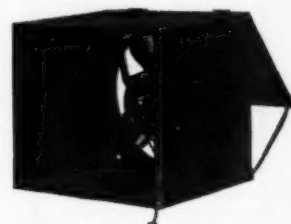
A voltage and fuse tester of watch case size for quickly and safely locating "blown" fuses, crossed circuits, dead receptacles, grounds, and for checking over installations is being introduced by the Electric Tester Mfg. Co., Portland, Ore., under the trade name of "Johnson." It consists of a resistor coil and other parts enclosed in a heat resistant, non-conducting circular case, $2\frac{1}{4}$ by 1 in. in size. A small indicating lamp burns dimly at 100 volts and brightly at 250 volts. Contact with 440 volts merely burns out the lamp without danger to the operator. The tester may be had with stiff 6 in. leads for general use or flexible 18 in. leads with an insulated clasp for electricians' use.



The Roller-Smith Co., New York City, announces the type EAF free handle circuit breaker designed to protect motors and feeder circuits against overload and voltage failure. It is equipped with a barrier unit to separate the arcing members and is built in both two and three pole combinations. This type is made in capacities from $\frac{1}{2}$ to 80 amp.; 250 volts, d. c. and 550 volts, a. c.



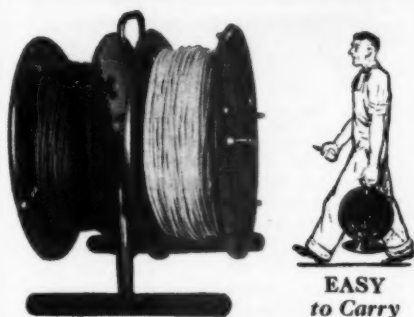
The Reynolds Electric Co., Chicago, has added Laco color hoods, circle and square color plates and color cylinders to its line. The color hoods are used with standard lamps up to 500 watts and are equipped with a spring holder for attaching to border lights, proscenium lights, clusters, footlights, etc. They are made of blown glass in ruby, green, blue, daylight, moonlight and amber. The cylinders are furnished in $7\frac{1}{2}$ by $12\frac{1}{2}$ in. and 4 by 6 in. sizes, the larger being two-piece to allow for expansion and contraction, and they may be had in ruby, green, blue and amber. Two-tone effects may be produced by using these in combination with the color hoods. The circle color plates are designed for outdoor floodlights while the square designs are principally for back-stage lighting and special fixtures having square or oblong lenses.



The Cincinnati Victor Co., Cincinnati, Ohio, announces the "Port-Air" ventilator for installation in any type wall. It has a single louver which operates directly by means of a pull chain and is held open automatically when the chain is released by a spring control. It is $13\frac{1}{8}$ in. square with 12 in. blades and is finished in dark green baked enamel. A $14\frac{1}{4}$ in. grating may be had in white enamel finish.

Hykon

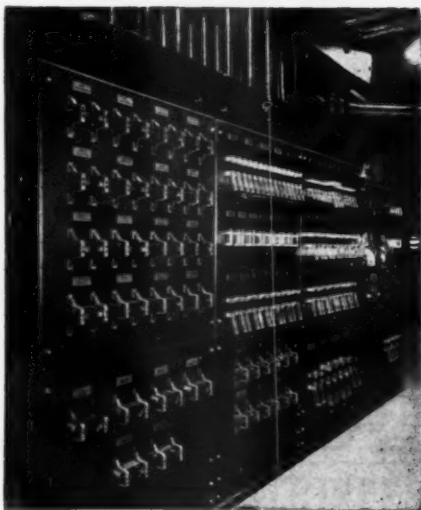
WIRING REELS



No Kinks

Let Hykon Reels save you time, labor and wire on every wiring job, large or small. The Units work independent; pull off one or both. Automatic tension stops wire unreeling when you stop pulling. Loaded in a few seconds from side; just slip coil onto adjusting pins and tighten plate; you don't turn wire on. There's a Hykon Reel for every type of wire and cable. Saves their cost in a short time. Send for "Reel" literature today.

The Hykon Mfg. Co.
ALLIANCE, OHIO



BERTHOLD

SWITCH and PANEL
BOARDS for
LIGHT and POWER

Berthold "Selectrolite" System of Lighting
Control for theatres, auditoriums,
lodgohalls, etc.

GUS BERTHOLD ELECTRIC CO.
555 W. MONROE ST. CHICAGO, ILL.

Steel
Cabinets



Stage
Equipment

Curtis Lighting of New York Moves

Curtis Lighting of New York, Inc., formerly located at 31 W. 46th St., announces the removal of its general offices and show rooms to the twelfth floor of the New York Central Bldg., 230 Park Ave. A large portion of this space will be devoted to a permanent exhibit of X-Ray products and an elaborately furnished lighting studio, also a fully equipped testing and experimental lighting laboratory.

* * *

E. H. Ames has been appointed district sales manager of the Economy Fuse & Mfg. Co., with headquarters at 525 Rice Bldg., Boston.

* * *

An industrial electric heating apparatus catalog has been distributed by the Westinghouse Electric & Mfg. Co., Mansfield, Ohio. The fields covered by the information in this book have to do with heat treating and enameling, melting of alloys and metals and electric heating elements. It includes concise definitions of heat-treating terms and practices, together with methods of determining size and capacity of equipment, cost of operation and rate and quantity of production.

* * *

Bulletin No. 47 has been issued by the Reynolds Electric Co., Chicago. It gives complete descriptions and catalog listings on the company's electric sign and display flashers, color lighting equipment, traffic controls, timers for special contacting work, motor driven dimmers, motors, and reflectors for poster and bulletin boards.

* * *

A new catalog, No. 720, describing its junction and joint boxes, has been issued by the Standard Underground Cable Co., Pittsburgh, Pa.

* * *

W. M. Cotie is now northwestern representative for the Inland Glass Works, Inc., Chicago.



60¢ EACH

JACKSON
Guaranteed Standard Quality

REFLECTORS

The above is a 12" shallow bowl Porcelain Enameled Steel Reflector and will prove to you the advantage of buying JACKSON REFLECTORS.

Send for Bulletin on our
Complete Line Today

Jackson
Electrical Company

910 W. Van Buren St. Chicago, Ill.

Twenty-Six Million
(and more)

PAINE

Spring Wing Toggle Bolts

Now In Use—

They must be good!

Merit alone put Paine Spring Toggles highest in the opinion of the electrical contractors of half the world. If they can save time, money and trouble while giving their customers a better job, you can do the same. Get a Paine Toggle Bolt and see for yourself. Mail the coupon.

Stocked by jobbers everywhere.



The PAINE Company

2947
Carroll Ave.
Chicago, Ill.

79
Barclay St.
New York, N.Y.

Coupon Brings Sample

The Paine Co., 2947 Carroll Ave., Chicago, Ill.
Please send me a sample Paine Spring Wing Toggle Bolt.

Name.....

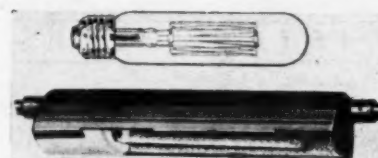
Address.....

City.....State.....

New Electrical Products



A receptacle made to fit any standard gang outlet box is announced by the Novelty Electric Co., Philadelphia, Pa. Mounting straps are grounded to ground post and an additional ground connection terminal is provided. This device will take both fused and unfused plugs. The former is shown. The housings on all plugs are grounded to ground post. The four-wire and three-wire receptacles and plugs are for use in three- and two-wire systems, the second and third connections being used as a common ground for all equipment.



The Reflector & Illuminating Co., Chicago, has brought out a unit called Kas-Lite Junior, designed to meet the demand for a show case lighting fixture small enough to avoid interference with the view of the display. It is $7\frac{1}{4}$ in. by $1\frac{1}{2}$ in. and is made for use with the new standard 25-watt T-6 $\frac{1}{2}$ intermediate screw base tubular Mazda lamp. The reflector is chromium plated copper, finished in statuary bronze.



The descriptive material which appeared last month with the No. 2163 squeeze type cable connector made by the National Electric Products Co., Pittsburgh, Pa., was in error, in that it stated that the connector uses "Bondnuts" which will tighten permanently against box wall due to the concave shape of the connector instead of the concave shape of the "Bondnuts."



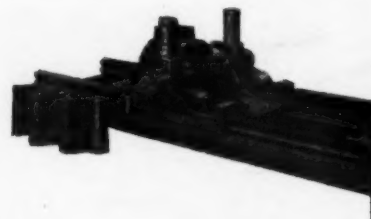
The Consolidated Lamp & Glass Co., Corapolis, Pa., has brought out, under the trade name of "Martelé Modernizers," in four finishes, a line of ceiling, hanging and socket type fixtures, also a wall pocket attachment, which distinctly expresses the trend in modern art lighting without departing from simplicity of construction and design.



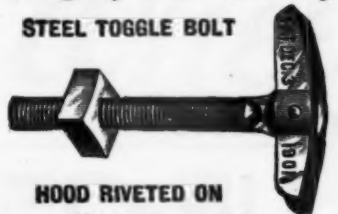
The Benjamin Electric Mfg. Co., Chicago, has developed a concentrating type unit for locations where a powerful light, mounted well above the working plane, is required—the range being from 15 to 80 ft. The light output is concentrated directly beneath the unit. Inside finish is aluminum-oxide and outside is a heat resisting green lacquer. Hoods are available for either pendant or outlet box attachment and 750, 1000 or 1500 watt lamps may be used. The unit is furnished with a dust-tight cover.



A manual and automatic across-the-line starting switch designed for refrigeration service is announced by the Diamond Electrical Mfg. Co., Los Angeles, Calif. Features claimed for it are: Panel and arc shields of bakelite; thermal overload relay; low voltage release; starting lever set integral with panel, and provision for two- and three-wire remote control.



The Simplex pipe pushing jack, manufactured by Templeton, Kenly & Co., Ltd., Chicago, is designed to push pipe underground mechanically, eliminating the necessity of digging up paved streets, alleys, lawns, etc. The pipe is gripped by jaws and one or two men operating each of the two levers cause the pipe to be pushed through the ground. The average time required to push a 3 in. pipe 25 in. through solid soil is between 5 and 6 minutes, according to the manufacturer, with two men operating each lever.

Wrigley for Quality**STEEL TOGGLE BOLT****HOOD RIVETED ON**

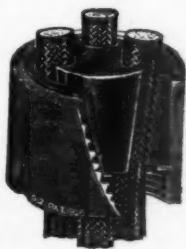
Wrigley Toggle Bolts
Made of heavier gauge steel.
Can be put through smaller holes
than average toggle bolt.
First Toggle Bolt made.

The Thomas Wrigley Co.,
504 Sherman St., Chicago, Ill.

**General Electric
Supply Corp.****EDISON MAZDA LAMPS
ELECTRICAL AND
RADIO SUPPLIES**

BALTIMORE RICHMOND
NORFOLK CHARLOTTE

Distributors for General
Electric Company, Radio
Corporation of America and
other large and reputable
manufacturers.

New Conduit Type Cable Support

A Simple
Two Piece
Cable Support
for Vertical
Runs.

Pamphlet
Mailed Upon
Request.

O. Z. Cable Support Co., Inc.

45 Bergen Street,
Brooklyn, N. Y.

E-Z WIRE STRIPPER**A HANDY TOOL**

This inexpensive tool
strips wire of 10 to 20
gauge 20 times faster
than usual methods.

A MONEY BACK
GUARANTEE with
every E-Z Wire Strip-
per. Send for yours
now.

\$5.00
LIST

PYRAMID PRODUCTS CO.

2313 South State Street

Chicago, Ill.

**Westinghouse Lamp
Promotions**

Fred S. Kinsey, former manager
of the Westinghouse Lamp Co. at
Philadelphia, has been promoted to
manager of the middle western
division of this company, with
headquarters in Chicago. His place
will be taken by George B.
Mackey, formerly miniature lamp
specialist in the Philadelphia dis-
trict.

* * *

A most attractive pamphlet on
its full line of color lighting equip-
ment which covers practically
every application for motion and
color in lighting has been issued
by the Reynolds Electric Co., Chi-
cago. A price list is also given on
the "Reco" and "Laco" equipment.

* * *

The Wadsworth Electric Mfg.
Co., Covington, Ky., announces
that the following additions have
been made to its sales force: C. S.
Campbell, 1361 9th St. N., Nash-
ville, Tenn.; J. T. Clarke, 520
Peters Bldg., Atlanta, Ga.; A. J.
Heinzmann, 505 Odd Fellows
Bldg., Indianapolis, Ind., and H.
N. St. Clair, 508 Caxton Bldg.,
Huron Rd., Cleveland, Ohio.

* * *

The Wagner Electric Corp., St.
Louis, announces the addition of
K. G. Baker to its Cincinnati sales
force. Mr. Baker has previously
been connected with Century Elec-
tric and Fulton Iron Works, both
of St. Louis.

* * *

The General Electric Co. has put
out an attractive booklet giving
full details on G-E Elevator Con-
trol.

* * *

The Westinghouse Electric &
Mfg. Co., East Pittsburgh, Pa.,
recently published circular 1821,
a 12-page illustrated booklet de-
scribing type W rotary switches.

* * *

The Appleton Electric Co., Chi-
cago, has issued an attractive
36-page bulletin, 9-A, on Apple-
ton malleable no-thread Unilets.
Copies will be furnished to any
interested in this line.

ESTIMATOR'S TIME SAVER

Rotometer

Every estimator's
tool kit should have
1. Rotometer ..\$4.50
2. Tallying
Machine ...\$4.50
for taking off quan-
tities of material
quickly and accurate-
ly. Used by leading
estimators. G U A R-
ANTEED to satisfy
you or your money
back.
Send \$4.50 each for
Rotometer or Tally
Machine, postpaid.

The Peerless Blue Print Co.

341-347 Fifth Ave.,
New York City



On a Vertical Conduit On a Horizontal Conduit

ELECTROLETS

Service entrance fittings that will go
on the top of a vertical conduit, or
on the end of a horizontal conduit.

Send for Booklet

KILLARK ELECTRIC MFG. CO.
3940 Easton Ave., St. Louis, Mo.

**Concrete Inserts Save Time
in Conduit Installation**

Pound them in the form; the con-
crete holds them solid; hang the
pipe below.

Send for Bulletin or Sample

Commonwealth Electric Co.
417 Broadway, St. Paul, Minn.

**THE RAWLPLUG CO., INC.**

66 West Broadway,
New York City

Branches in 25 Cities
Write for Bulletin B-201

SINCE 1895



MORE NEW OUTLET BOX DEVICES

WEBER PULL RECEPTACLES FOR 3 1/4-in. BOXES

May be used on either wall
or ceiling.

National Electrical Code
Standard, of course.

Cat. No.

4010 With ring for ball lamp,
as shown.

5010 With ring for shade-
holder.

Standard equipment is 7-in. in-
sulated chain. Short chain and
3-ft. cord may be had at the
standard price.

Standard finish of exposed
metal parts is Polished Nickel.
Brush Brass may be had at the
standard price.

Sold through Weber
wholesale distributors.

Send for Sample.

HENRY D. SEARS

General Sales Agent

80 BOYLSTON STREET

BOSTON, MASSACHUSETTS

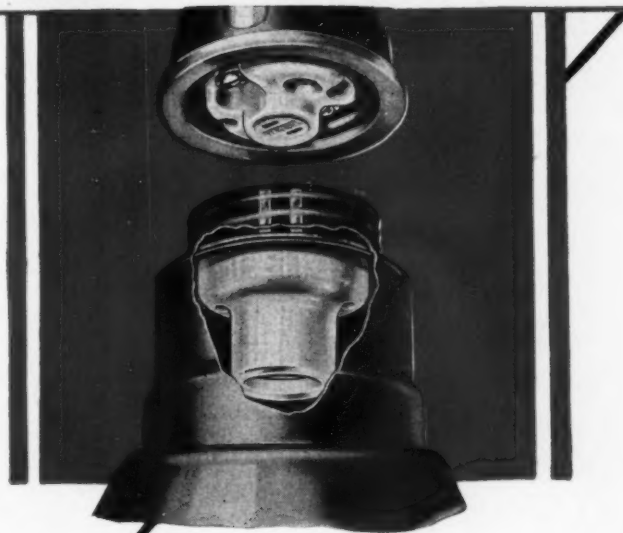


WEBER DEPENDABLE
WIRING DEVICES

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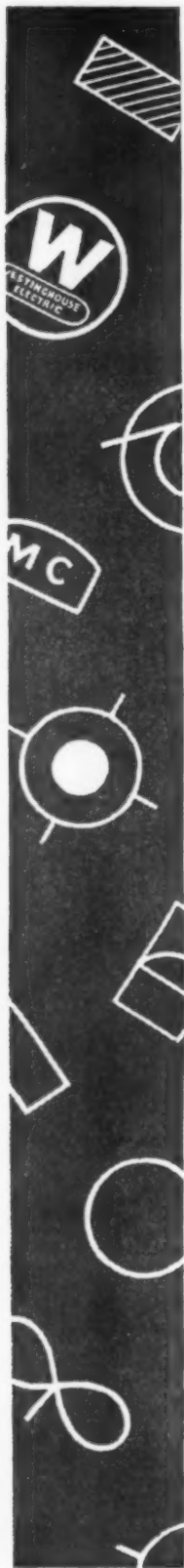
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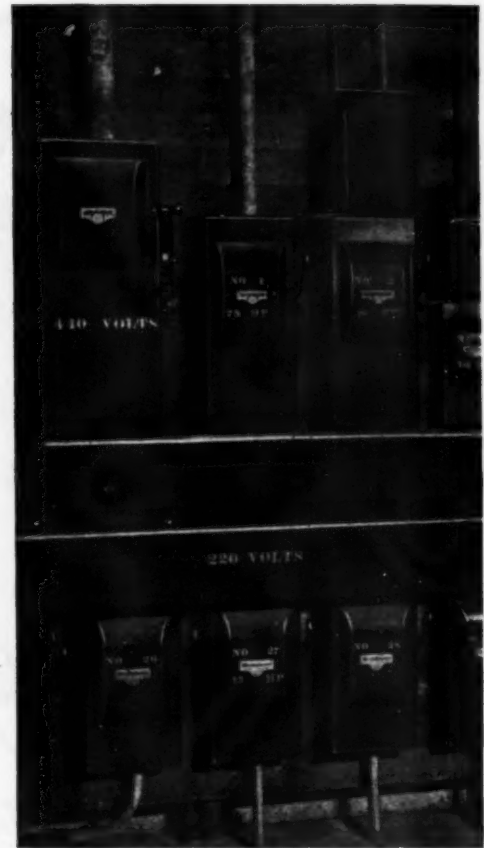
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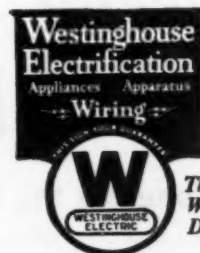
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the
complete
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